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Beware the new Yahoos

It requires perhaps the satire of a Swift to describe with proper force what is happening to Britain's universities, polytechnics, and colleges (and schools, hospitals, jobs...) as the third year of Mrs Thatcher's rule comes to an end this spring. Perhaps only a new Gulliver on a return visit from the kingdom of Swift's imagination, and particularly to Lilliput, that unsurpassable literary folly of the old Whig corruption, could enable us to see clearly the idiocy of a policy that seeks to sacrifice one of the world's best higher education systems, along with many other excellent social institutions, to rescue one of the world's worst economies. The satire is only strengthened by the fact, obvious to all but a tiny group of politically motivated men and women in the cabinet room at Number 10 Downing Street, that rescue by drowning is decisive without being effective.

Who else but a satirist could adequately describe the recent news that Bulgaria (not Brodningg), one of the world's nastier and poorer "people's democracies", is to re-equip its higher education, while Britain, one of the world's oldest and most faithful liberal democracies, is to spend an extra £200m or so on universities - not to expand or improve them, but to compensate university teachers who will be made redundant by universities which have no desire to make them redundant at a time when the social demand for higher education is increasing and its economic rate of return is substantially favourable and on the brink of an age when scientific knowledge and its social and technological application will become the engine of material progress.

Perhaps on reflection it is a little unfair to compare such negative attitudes to those of the Lilliputians who appeared to Gulliver to enjoy a society of some sophistication and whose archaisms and corruptions could easily be forgiven. Lilliput may not have been a learned but it was a cultivated society. So perhaps a better comparison would be with the antimilitaristic behaviour of the Yahoos. For British higher education, and indeed Britain, seem to be prisoners of an anti-rationality that is extremely difficult to forgive. Sadly we have no Swift to satirize, ridicule, and so oppose the malignant absurdities of the present course of public affairs.

Deprived of our Swift we must discuss instead as semi-rationality as we can a large number of essentially subsidiary and dependent questions, all perhaps proper ones under different conditions, like the University Grants Committee's selectivity strategy, the future of the Social Science Research Council, the shape of the national body, or academic tenure, while uneasily and even guiltily ignoring the essentially irrational political context in which these questions appear; just as those outside higher education must contemplate

as calmly as they can policies such as a massive investment in ersatz further education through the Manpower Services Commission while real jobs for young people are being destroyed and real educational opportunities are being cut.
Two plans of mitigation are often entered on behalf of the Government by those who have been made profoundly unhappy by its policies and in a private corner would freely accept their essential irrationality but whose instincts for political moderation make it equally difficult for them to believe the worst. The first is that because of Britain's mediocre economic performance we cannot afford as much higher education as we would like. Of course, the Government has overreacted and is now running the risk of producing in future rather less higher education than we need, this argument runs, but was basically right to curtail the over-ambitions of the Robbins age.

However, there are two powerful objections to this first mitigating plea. First, Britain's mediocre economic performance is not a new phenomenon. It can be traced back to at least the 1880s and some would argue to the 1850s. In other words during the whole period in which our modern system of higher education was built Britain's economic performance has been unsatisfactory if the measure of success is the average growth rates of all industrialized countries. Yet we had enough confidence in the future then to build our great cities.

But haven't things got much worse recently? Well, no, they haven't. During the last 30 years Britain has enjoyed real economic growth on a scale not equalled since the 1870s, except briefly in the 1920s. The gross domestic product increased by more than half between 1961 and 1980. Even during the depressing 1970s it rose by 16 per cent. Indeed, to narrow the period still further, the five years of the last Labour Government from 1975 to 1979 saw a 10 per cent increase in GDP. Not Japanese rates of increase perhaps, but surely not so bad that one of the best higher education systems in the world must be massacred to push up the rate by a couple of decimal points (leaving entirely to one side the contribution a highly educated workforce makes to economic growth).

The origins of this irrationality cannot be found in any economic necessity. Instead they must be found in the political pathology of modern Britain. The "British disease" is only incidentally a description of a less than satisfactory economic performance. It is much more the superstructure of national masochism, that ranges from a demoralizing loss of faith to a positive, dangerous delight in despair. The excellence of our higher education looks like being one of its main victims in the 1980s - which is why we need not another Robbins, administratively to embody the generous spirit of an earlier age, but a Swift, to oppose and lacerate it.

Auspicious start for NAB

The new National Advisory Body made a modest but distinctly promising start at its first meeting last week. Although the range and quality of its detailed work must remain a matter for speculation for the moment, Mr Christopher Ball, the chairman of the board, put down some important markers (some might call them hostages to fortune) about the way the NAB would work. Perhaps the most welcome news was the stated determination of all those involved in the new body to operate with a degree of openness which has been lacking when important decisions about higher education have been taken previously. A large measure of the resentment felt about the University Grants Committee's cuts has been due to the secrecy

which surrounded its judgments. It is to be hoped that Mr Valdegrave is right that the NAB will not only win friends through its policy but also bring about pressure on the UGC to be more open itself.

It will take some time to determine the part of the NAB to keep to its word when the hard decisions have to be made. The UGC has always shrunk from making public its views about which departments and institutions are strong and which weak; but this is exactly what the NAB will have to do. The immediate commitment to publishing the binary line was also a welcome prerequisite for the success of the new body. Although Dr Parkes has admitted himself to be disappointed that cooperation is not

Laurie Taylor



(A professor at age 47, would now be £55,000 in redundancy payment. The Times, February 1)
... And thanks to service beyond the call of duty by domestic bursars, I am delighted to be able to report a 10 per cent increase in our conference wages for the academic year 1980/81, which has been achieved at the reduced small academic cost of a reduction in the length of each term to six weeks. I'm certain you'd like the broad appreciation to be missed. (Cite of "Hear, Hear" - I should say "Yes".)
"Academic resources committees therefore pleased to announce that there is no longer any financial reason for demanding the immediate closure of the Institute of Nineteenth Century Verse." (Cites of "Hear, Hear".)
"As you will know there are at least two vacancies in the Institute which will remain unfilled. Both, I understand it Professor Gollightly is specialist positions?"

"Yes indeed sir. We're not a specialist in nineteenth century anonymous comic verse, and I cover Dr Plaquette's traditional popular three-term course at Arthur Quiller-Couch."

"Minor tragedies, Professor Gollightly. Minor tragedies, but which, I believe, fall into perspective when set alongside the good news of your own continued incumbency of the Institute."

"Indeed sir. Good news indeed. Might I just ask, sir, as a matter of passing interest, if you have seen the new figures on student applications to the Institute?"

"No Professor, you have the benefit of me there."

"They do show a rather alternative drop. Nearly 4 per cent down this year."

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Parkes warns on medical schools crisis

by Robin McKie
Science Correspondent
Universities may soon be told to take action over the staffing crisis in the medical schools which is threatening teaching, research and health care. Dr Edward Parkes, chairman of the University Grants Committee, told MPs this week he was considering intervening on medical cuts.
Although medicine was not told to reduce student numbers, the UGC told schools they would be expected to take an average 11 per cent cut in budgets. However a high turnover of staff has led to shortages because of a general freezing of university posts. This has particularly affected geriatrics, pathology, psychiatry and neurobiology.

Dr Parkes told the Select Committee on social services: "It is possible that these matters may now be referred to in our next grant letter to universities."
Yet he refused to agree that there was a crisis affecting medical education and its support of local health services, despite heavy pressure from Select Committee members to do so. "I can appreciate the worries of schools for the short term future, but I find it hard to understand their fears for the medium-term future," he said.

Although Mrs Renee Short, chairman of the Select Committee, said some specialist medical subjects were facing "very bleak prospects", Dr Parkes replied that he found it hard to understand why the most expensive part of the university system should be unscathed.
He believed a slow shift of resources would see an improvement in the situation. "The present cuts affecting medicine are no doubt bigger than intended but these are only short-term," he said. He rejected the suggestion that UGC protection of clinical medicine should be restored.

Spending on education drops
The proportion of Britain's Gross National Product spent on education declined by almost 1 per cent between 1975 and 1979, statistics published this week by the Department of Education and Science reveal. The figure had dropped to 5.4 per cent by 1978-9, compared with 6.3 per cent three years earlier.

Now universities face extra pension bills
Universities will also be expected to make claims on the Department of Employment.

The UGC has written to the Committee of Vice Chancellors and Principals to clarify its letter of February 3 on how the redundancy scheme will be implemented. This follows a stormy meeting between Dr Parkes, the UGC chairman and to those over what would happen to those universities with more generous schemes for compensation.

One proposal was to distribute half of the extra £16m available for this current financial year at the end of this month. The other half would be shared out in May, when the normal allocation is made, and a further £50m is available for 1983/84.



No pleasing the councillors

by Paul Flather
Local authority leaders are reacting with suspicion and anger to proposals from both the Government and the Opposition to centralize control over education spending.

Labour's proposals to establish minimum national standards for education, legally guaranteed and backed by specific grants, were unveiled by the party's education spokesman, Mr Neil Kinnock, at a weekend conference in Sheffield.

The Government has already published a Green Paper on Alternatives to Domestic Rates, with an appendix on financing education which advocates a number of options including a separate block grant.

Government ministers are studying the Green Paper, but the option for a separate block grant has been received favourably inside the Treasury and the Department of the Environment, because it would remove the most expensive and most politically sensitive item from local authority control.

The most extreme option in the Green Paper is for the complete removal from local authorities of financial responsibility for education, which might bring the DES plan for central control of polytechnics and colleges back into favour.

Lecturers to receive low offer

by David Jobbins
College lecturers are certain to be offered less than 4 per cent when the Burnham further education committee meets on Monday for the first time since the 1982 pay cycle. Schoolteachers last week rejected a 3.4 per cent offer, but it was not immediately clear whether a similar offer would be made to lecturers.

The 3.4 per cent offer was based on the 4 per cent cash limit, reduced because the employers calculate that teachers are leaving the profession more slowly than the Government forecasts.

As the employers did not disclose the basis of their calculations in Burnham primary and secondary, union leaders were cautious at estimating the size of Monday's offer. It is not clear whether the employers believe the school staffing strength is falling at a different rate to the colleges and polytechnics.

The lecturers are claiming 12 per cent and a £250 flat rate payment to aid lower paid staff. If the 3.4 per cent offer was accepted it would give a Lecturer 2 on the minimum an extra £4 a week. The average salary would rise from £10,410 to £10,764, and the salary of the directors of the largest polytechnics would increase from £25,920 to £26,801.

No mention was made in this week's negotiations with the teachers of the government manual workers. It had been suggested that awards over the cash limit would have to be recouped from other settlements, but the management limited their case to the pace at which teachers were leaving the profession.

But they did emphasise the difficulties that local government faced, and warned that a settlement above their offer would have a serious impact on educational provision.

The National Association of Teachers in Further and Higher Education has not wavered from its opposition to the inclusion of the Teachers in Burnham. General secretary Mr Peter Dawson said: "We have made plain we do not regard them as a member."

APT's representative on the committee, Dr Tony Pointon, is likely to raise the union's exclusion with the committee's chairman, Sir John Wordie, on Monday.

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# Czechs issue new plea for help

by Paul Flather

A dramatic appeal from a leading Czech dissident for European and American academics to continue visits to Prague to take part in unofficial seminars has just reached Britain.

Dr Ladislav Hejdanek, who has taken over the role of philosopher Dr Julius Tomin, has appealed to academics from Britain, Holland, France and the US, to continue their trips in spite of "discomforts to us and them" from the Czech security police.

His appeal follows the recent arrest and detention of French philosopher Jacques Derrida, charged with smuggling after drugs were "found" in his possession as he left Prague after attending one of the unofficial seminars.

"We firmly hope that our friends abroad will not become discouraged," he says in his appeal, released by Paluch Press in London. "Whoever may be afraid of the real philosophy, we are not going to give up and we intend to continue making progress as long as the interest possibility remains.

Paying tribute to Dr Tomin, he says: "I, together with my students and friends, believe that it is worth continuing his work and keeping in touch with philosophers who are willing to come and give lectures on their work, even if it heralds more discomfort for us and them. "And if our authorities do attempt to make it impossible by illegal means - for they cannot do it by any other means - we hope for the support and protests of those who are aware of the importance and universality of philosophy and human culture in general."

Dr Hejdanek, 54, a Charter '77 spokesman, graduated from Charles University in Prague, but has been forced to work on building sites, as a watchman, and a boiler stoker. He



Dr Hejdanek: continuing Tomin's work

was imprisoned in 1972, and played a leading role in the Christian-Marxist dialogue of the 1960s.

Weekly seminars have been held in his flat since April 1980, and although he has been detained twice, the incident involving Derrida was the first serious police test. Dr Tomin, now working in Oxford, was forced to abandon his seminars in 1980 after repeated attacks and detentions by security police.

Dr Hejdanek makes clear his total opposition to the Czech authorities, describing the social position as approaching a "conspiracy of the incompetent" and the crisis of Czech philosophy as so deep even Marxist philosophers cannot operate freely.

A leading British philosopher, involved in visits to Prague, this week responded to the appeal promising that academics would not be deterred from continuing their visits. "Obviously we will not lose interest in one of our colleagues who holds the same values on philosophy just because of these difficulties."

Meanwhile it is understood the French government is continuing with high level protests to the Czechs over the way Jacques Derrida was "framed", and detained for three days.

Three Oxford philosophers were expelled in 1980 for attending Dr Tomin's seminars.

# Diabetes research threatened

by Robin McKie  
Science Correspondent

Research into life-saving treatments for diabetes is now being seriously threatened because of academic cutbacks at London University, Professor Henry Keen, of Guy's Hospital medical school warned this week.

Professor Keen, of the school's department of medicine, said cuts in tenured places could mean the end of the team of diabetes researchers assembled at Guy's. There were now such slim chances for researchers on short-term contracts being given a university post that many were being tempted to work in America or to take jobs in the pharmaceutical industry.

"This trend affects medical research across the board and is a source of great anxiety. Certainly as far as we are concerned this threatens to kill off our cohort of researchers."

Professor Keen's team has been responsible for developing pumps which deliver insulin to be steadily delivered into the body, and dispense with one-off injections. At present his team is collaborating with American groups to determine the potential of this treatment which may one day prevent sudden blood and kidney failures among diabetics due to suspected rise and falls in their insulin levels.

"Diabetes is the biggest cause of blindness in middle age and half the people who develop the illness before they are 30 are dead before they are 50, so there is a room for a great deal of improvement in our present treatments," said Professor Keen.

He said many bright young researchers on fixed term contracts, who would normally be given academic appointments, were turning from medical research because of the lack of security. "This won't make much difference to health care immediately but one day in the not too distant future, we may find that we have lost something very valuable."

Professor Keen said his team was now seriously threatened because some of his best young researchers were facing the prospect of their contracts ending with no appointment in the pipeline. "Some could take extensions to their contracts but for scientists in their 30s it is asking a lot of them to continue with the uncertainty of no fixed posts. I think there must be some regrouping of resources within the health service to help end this critical threat to our future health care."

# News in brief

## University cuts 'will save £200m'

The Government estimates that cuts in university spending will save £200m by the end of 1983-84 and £150m the following year, Mr William Waldegrave, under-secretary for higher education, told the Commons this week.

He rejected a renewed call from the Conservative MP for Exeter, Mr John Hannam, that the time scale for cuts should be extended. Responding to the description in *The Times* of the Secretary of State for Education and his ministerial team as the "Yes Yahoos," Sir Keith Joseph said: "Name calling does not solve the problem of reducing inflation and unemployment in this country."

## Faculty bequest

Edinburgh University's medical faculty has been left £270,000 by Sir Stanley Davidson, a former professor of medicine who died last year aged 81. Sir Stanley and his wife gave nearly £80,000 to the faculty during his lifetime to endow a biennial lecture and help teaching, travel and research.

## Chelsea cutback

The senate of London University's Chelsea College has voted to cease teaching the humanities and social studies. The recommendation will go to council on March 31. The decision was made to reduce the staff establishment by a further 15, on top of the 25 per cent reduction in number of academic staff agreed last month. This will take staffing from 221 in August 1981 to 150.

## Social research

A residential workshop on "clarifying research" to help social workers develop research actively for themselves is being held in March at Sheffield University. The course is being run by the Association of Teachers in Social Work Education.

## Child study

Professor John Nisbet of Aberdeen University's education department has been awarded £28,300 by the Scottish Education Department for research into children's learning, discovering whether children from ten to 14 have begun to show differences in their approach to school work, and if difficulty and success can be linked to certain study methods.

## Early birds

More than 1,000 people have already booked their next Christmas meal at Keele University which arranges romantic candle-lit dinners from December 13 to 17. Last Christmas, the Keele dinners grossed £28,000, providing about £16,000 for the university.

## Gays barred at Glasgow

Glasgow University Union, the former men's union which two years ago was obliged to admit women following threatened financial strictures by the university, has refused to affiliate to it.

GaySoc, which was set up more than three years ago and has 100 members, is already affiliated to Queen Margaret Union, the former women's union which voted to allow men membership three years ago, and now proclaims itself The Liberal Alternative. The president of Queen Margaret Union, Mr Dominic d'Almeida, a member of GaySoc, said: "I think this is the first known occasion on which a recognized university society has been knocked back for no other reason than individual prejudice."

Mr Colin Stevenson of Glasgow University Union's board said the union has the constitutional right to refuse affiliation and was under no obligation to give any reason whatever. However, there are alleged grounds for the union would lose its licence if homosexuals were admitted. Students could be only 17 when they came to university, said Mr Stevenson.

# Staff could train 50% more teachers

by Patricia Santinelli

Most colleges and polytechnics could increase their output of primary trained teachers by nearly half without altering current staffing levels, a major survey of 70 institutions has concluded.

The survey, believed to be the first of its kind, was conducted by the Standing Conference of Principals and Directors of Colleges and Institutes in Higher Education and the National Association of Teachers in Further and Higher Education, on behalf of the Advisory Committee for the Supply and Education of Teachers.

It follows a Department of Education and Science manpower projection which indicates that a major shift in the balance of primary to secondary trained teachers will be needed from the middle of this decade to meet the requirements of schools in the late 1980s and the first half of 1990.

The DES paper indicated that even a 60 per cent swing to primary output would not meet the demand for primary entrants which will have risen from 4,600 to 10,000 by the end of the 1980s. It doubted the ability of the public sector to enhance primary training sufficiently.

But the survey, based on the output potential of the 1983 intake, shows that output for primary post-graduate and one year courses could be increased by 64 per cent from

1,321 to 2,153. The numbers trained via the BEB Ordinary and Honours primary courses could be increased by 40 per cent from 3,925 to 5,529.

"The implications for the balance of training would vary depending on whether the secondary input/output remained constant or were adjusted," the survey says. "If however the numbers of teachers trained in the institutions remained constant at 1981 output figures - current total output is 10,685 shared almost equally between primary and secondary - the primary balance of training would rise considerably."

The survey also shows that between them the 70 institutions have over 4,500 staff who have experience of teaching ranging from infant, primary and below secondary level. Out of an anticipated 420 staff changes in the next five years, these could be made so as to increase primary output even further.

The authors of the survey point out, however, that such an increase in primary output from the middle of the 1980s is dependent on institutions being given revised targets at the earliest possible moment.

Secondly they ask that clear public statements be made about the proposed increases in places, the potential for employment and admission requirements.



Mr William Waldegrave, under secretary for higher education, with students who joined him for a seminar this week at Keele University's School of Education.

David Harrison, senior officers and academic staff. Mr Waldegrave said there was an important place for Keele but on a smaller scale than previously planned. There would have to be greatly reduced access to the universities in future, he warned. Students' union representatives presented him with papers on the effects of fewer grants in real terms and new arrangements for financing unions.

# Rothschild review gets under way

Lord Rothschild visited the London headquarters of the Social Science Research Council in Temple Avenue last week to hear evidence of the council's achievements in recent years.

He spent 90 minutes taking evidence from council members as part of his independent review of the work of the SSRC, ordered by Sir Keith Joseph, secretary of state for education.

Lord Rothschild is now fully immersed in his review which, at his wish, is to be as wide as possible. He has been receiving submissions and interviewing for almost three weeks.

Council members, led by Mr Michael Posner, the SSRC chairman, last week stressed the "usefulness and excellence of a range of council-backed research." The jewel in the SSRC crown is macro-economic forecasting which has been receiving £500,000 a year.

But council members also focused on the diversity of SSRC research, for example from the North Sea Oil panel which has just finished work, to current studies on Northern Ireland and the careers of research workers themselves.

A strong contribution came from Dr Anthony Edwards, professor of education, behaviour at the Institute of Psychiatry, who heads the newly established panel looking into drug addiction in Britain.

Council also stressed the importance of the different modes of funding adopted, from annual grants to the research units and designated research centres, rolling grants to the initiative panels, to one-off grants to research teams.

Lord Rothschild has also been receiving many unsolicited submissions from social scientists. One of the earliest came from Dr Adam Vella of Oxford Polytechnic, who urges the SSRC to assist to date on the research work of the Commission for Racial Equality, worth about £1m.

Other such submissions are expected from Warwick University, and the Social Science Action Committee.

# Channel 4 outlines plans

by Patricia Santinelli

The Government's decision drastically to cut higher and further education, while simultaneously investing vast sums in youth training was a complete distortion of resources allocation, a senior Channel Four editor said this week.

Ms Naomi McIntosh, former Open University pro vice chancellor and now senior commissioning editor for education on Channel Four, which began in November was being interviewed at the National Film Theatre in the fifth of a series of meetings on "Channel Four - What's the Difference" organized by the British Film Institute.

She said that cutting back universities and putting £700-£800m in youth training was a typical example of the way resources were cut and could be allocated based on a crazy view that some education was good, while some was bad.

Ms McIntosh said that she rejected this point of view as sterile. Channel Four's attitude was that education was a continuing process and no such

divisions could be made. She confirmed that Channel Four's education output which is to consist of seven to eight hours a week, part of it during peak time, and representing 15 per cent of the channel's total output with a budget of £10m would concentrate heavily on education for adults.

She argued that we must get rid of the notion that supply followed demand. It was the other way round, as the adult literacy programme had shown. It was not only an act of faith, but a question of not relegating programmes to "graveyard" slots which would undoubtedly depress demand.

The plan at the moment is to have a wide variety of programmes and formats. Output will cover education for consumers, literacy, basic education (probably numeracy), leisure activities, sport, physical fitness, visual education and there will be a "high culture" series dealing with the arts, literature, archaeology and history.

# Ice-maker will save lives

Scientists at Strathclyde University, Glasgow, have looked back to the nineteenth century for the technology they needed to ensure the success of a world-wide campaign to immunize every child against six diseases.

They have developed a simple ice-making machine, which can be operated from wood burning stoves, to ensure that the vaccines are kept cool on their way from the manufacturer to the children. At high temperatures the vaccines are rendered useless.

The campaign is coordinated by the United Nations' World Health Organization. It hopes to prevent the deaths of about five million children a year from diphtheria, whooping cough, tetanus, measles, polio and tuberculosis.

Less than 10 per cent of the 80m children born each year in the developing countries receive immunization. And for each dead child, another survives who is crippled, blinded, mentally retarded or otherwise disabled by the infections. One of the main battles of the immunization programme facing the

tropical world is the problem of saving the vaccines from becoming impotent through excess heat during transport and storage.

But most vaccine refrigerators are produced in the rich countries where temperatures tend to be cool and electricity supplies constant. Such equipment frequently proves useless in the conditions of the developing world. Aware that any practical solution must be based on the use of rudimentary energy sources, the Glasgow team sought their clue in their own country's past.

They looked back to the Scottish scientist Michael Faraday who, in 1824, discovered the principle of intermittent absorption whereby liquid ammonia as it evaporated and the resulting gas were absorbed into silver nitrate - producing a chilling effect. The Strathclyde machines based on this principle, which are about to be released for deployment, work on a scale around the tropical belts are capable of producing a kilogram of ice in two and a half hours.

# Fowler voices fears on NAB membership

A lack of experience of polytechnics and colleges among almost all members of the National Advisory Body will threaten the sector's most valuable work, Mr Gerry Fowler, the new director of North East London Polytechnic has predicted.

Mr Fowler, a former under secretary for higher education, said that the new system might effectively destroy the type of higher education which the late Mr Anthony Crosland and the other architects of the polytechnics intended for the public sector.

"What I fear is that by a policy of drift or a non-policy, which is what it really is, what is distinctive will be eroded because nobody on the NAB understands the public sector," Mr Fowler said at a press conference last week.

Only the institutional representatives on the board of the NAB were well acquainted with the work of the public sector, he said.

His own polytechnic had already agreed to save £463,000 from its current budget as a contribution to the £1,263,000 pool reduction announced after the recalculation of 1981-2 figures. Mr Fowler met NAB's joint education committee last week and was given approval to draw up a restructuring plan for the polytechnic to cope with budget cuts over three years.

# School to recruit from university

Marlborough College, one of the country's top public schools, has been hunting for a new mathematics teacher among university lecturers who face redundancy, or no promotion prospects.

The school has written privately to about 25 vice chancellors to ask if anyone in their mathematics departments is interested in Marlborough which has 780 boys and 100 sixth-form girls. So far two responses have arrived.

Mr Roger Ellis, the headmaster, says in his letter: "I am writing to you because it seems possible that a member of an appropriate faculty might find his path blocked, or even his security of tenure at risk."

Marlborough has about 100 sixth-form pupils taking mathematics A level, the top set taking further mathematics as a fourth A level subject. The school's mathematics department has been badly advised or who had

# Research staff look to ASTMS

by David Jobbins  
University research workers are edging closer to enlisting the aid of the Association of Scientific, Technical and Managerial Staffs in their battle for a permanent career structure.

Their dissatisfaction is growing with the Association of University Teachers, which lacks a long-term policy following rejection of the latest proposals by its council late last year.

The 300-strong Association of Researchers in Medicine and Science, which has a substantial proportion of AUT members, has been involved in talks with a senior ASTMS official, Mr Mike Watson.

"We have been looking at the possibility of working more closely with ARMS," Mr Watson said. "We have held some talks with the association just to explore the possibilities."

There are clear similarities between each union's research staff policies, both of which are based on a permanent career structure. ARMS president, Mr John Dickenson, resigned from the AUT last year in protest at the direction AUT policy was taking and joined ASTMS. In January the organization changed its name from the Association of Researchers in Medical Science to indicate that its membership was open to workers in all fields.

Its secretary, Dr Eileen Unger, said: "We are considering putting to the members that we recommend either the AUT or the ASTMS rather than joining either. We have been sitting on the fence between these two unions and not really getting very far with either."

"The ASTMS policy attracts us, we recognize this is more than the AUT has now, and exploratory talks are going on with ASTMS - just as they may with the AUT."

Research workers feel most vulnerable to the cuts; many are on a series of short-term contracts which embody waiver clauses under which important legal employment rights are signed away.

# Threat to adult college

by Paul Flather

College principals, lecturers and adult educationists, are watching anxiously as Manchester City Council continues its intense discussions on next year's budget which could lead to a £7.5m cut off further, higher, and community education spending.

The city's ruling Labour group was meeting again this week to decide how high rates and rents can be raised to minimize cuts needed to meet Government targets. The highest band of cuts would require £20m off the total £120m education budget.

Although the city's education officers were confidently expecting a final cut of no more than £10-£12m, it seems likely that the city's College of Adult Education will close and that the College of Higher Education and the seven further education colleges will be severely run down.

Dr Arthur Johnstone, principal of the higher education college, said the college faced a £1.1m cut (34 per cent) on next year's budget after the pool allocations and was already planning 25 academic and 25 non-academic voluntary redundancies.

"My problem is to ask the city for some money to offset this massive cut. If we have to bear it in full I really do not know where we go from here after the savings we have made in maintenance, supplies, books and so on," he said.

Mr Harry Johnson, branch chairman of the Association for Adult and Continuing Education at the adult education college, said 6,000 people enrolment on courses and all the part-time attendants would be left in a "city desert".

If the college closed, and the adult and youth training provision was wiped out, many people would be left with nothing to do, and this could lead to a repetition of last summer's troubles in the city.

The National Association of Teachers in Further and Higher Education also said the cuts would have serious effects. Regional official Mr Ian McKay said the city had indicated it would inevitably have to drop its policy of no compulsory redundancies. Conditions of service would also be worsened, he claimed, with a move to the highest class contact hours permitted under the national agreement.

"This is a variation of lecturers' contracts and is certainly a step we would oppose."

# Wanted; a middle man

Research in Britain must be properly tailored to the needs of industrial manufacturing firms competing on international markets, the Select Committee on Education and Science was told this week.

The acting chairman of the Advisory Council for Applied Research and Development, Sir Henry Chilvers, said there were two important scientific roles that could be carried out by Government which could improve our industrial technology.

"First, it could coordinate public purchasing to ensure that companies are obliged to make products which are internationally competitive," he said. Secondly the Government could "articulate" research and development in this country to back up this approach.

This view was supported by Dr

# DES denies avoiding its duties

Mr William Shelton, under secretary of state at the Department of Education and Science denied this week the department had opted out of its responsibilities for vocational education and training.

The department has recently come under attack for letting the Manpower Services Commission take a major role in initiating, developing and funding new courses.

But speaking at a conference on schools, YOP and the New Training Initiative organized by the Schools Council at Stoke Rochford, Mr William Shelton said this was quite wrong and trends were in the opposite direction.

"We and the MSC are in deep discussion about how the education service, including the planning of curriculum, can play its part in the planning of provision, and about what kind of contribution the commission can make to developments on the full-time education side."

Commenting on the proposed changes in eligibility for supplementary benefits which might mean thousands of students can no longer attend college without losing benefits, Mr Shelton said the department was now actively considering the situation.

The National Association of Teachers in Further and Higher Education is considering taking legal advice over the issue. The association claims the Department of Health and Social Security did not consult the DES or local authority associations about the advice recently issued to some DFSS offices.

The delegation also opposed Scottish Office plans to refuse grants to students repeating a year because of failure without medical or compassionate grounds or because they had stonate transferred courses. The Scottish Office claims this could save £2m in the coming year. However, the delegation said it would result in a waste of talent, with students who had been badly advised or who had

made an unwise decision being forced to give up courses. The delegation was told that the Scottish Office had already decided to stop grants for repeat years, although their views would be relayed to the Scottish Education minister and Scottish Secretary, but that no final decision had yet been made on axing grants for transfers.

Although the principal of Paisley College of Technology, Mr Tom Howie has written to the secretary of the SED criticising the cut in grant for repeat years, around 200 students are holding a sit-in in the college in protest at the SED's move. The Administration Offices this week, the coming year. However, the delegation said it would result in a waste of talent, with students who had been badly advised or who had







North American news

North American editor Peter David reports on the reaction to President Reagan's budget proposals

Reagan opposed by both sides

The rudiments of a bipartisan opposition to President Reagan's education cuts began to form themselves on Capitol Hill last week following the announcement of the 1983 budget.

Liberal Republicans in the Senate and key Democrats in the House of Representatives said the swinging cuts of more than 40 per cent which the White House was seeking in students grants and loans were unlikely to win Congressional approval.

Senator Robert Stafford, republican chairman of the Senate's Education Subcommittee, said that the senate could not agree to such big reductions. "This is what you might call the educational safety net. We have cut as far as we can," he said.

In the House of Representatives Senator Paul Simon, chairman of the House Education Subcommittee, also said Congress would block the cut. The House committee has spent the last fortnight hearing testimony on the importance of the grants and loans now under threat.

Mr Terrell Bell, the Education Secretary, said the cuts were fair in comparison with other government departments. He said on CBS television: "We are getting our numbers together and we are going to persuade Congress to go along with us."

But he conceded that there would be "considerable opposition" in Congress to the proposal to dismantle the Department of Education and replace it with a smaller foundation.

The proposal for a foundation is opposed by two separate factions in Congress. On one side are those who supported its creation under former President Carter and believe it signals the federal government's commitment to education's well-being.

On the other, many right-wing Republicans believe the foundation - like the Education Department - would encourage the federal government to maintain too strong a presence in education policy-making. They want individual states to control most education policy and would prefer all the present functions of the department to be abolished or given to other government departments.

Mr Charles Saunders, vice president of the American Council on Education, predicted strong opposition to both the cuts and the abolition of the department. Last year Congress had accepted the president's budget. "This year they are saying we are going to oppose any further cuts in education."

Funding problems for science

Although science fared better than other parts of President Reagan's 1983 budget proposals, university scientists have given the budget a cautious welcome.

"At first blush one sees that the physical sciences and engineering are reasonably well treated but that in other areas development is still being restrained," said Mr John Crowley, research director of the Association of American Universities.

He said there remained major problems for science funding, particularly anxieties about the shortage of funds for laboratories and equipment.

An analysis of the 1983 budget by the White House Office of Management and Budget estimates that across the government as a whole some \$43,000m will be earmarked for research and development in 1983 - an increase of \$4,200m.

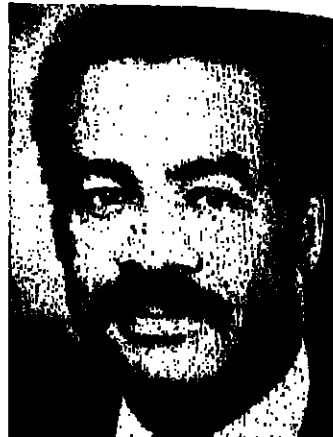
But the increases vary widely from department to department. Defence R and D will account for \$3,900m of the overall increase and by 1983 the Pentagon will consume 57 per cent of the national research budget.

Smaller increases are planned for the National Aeronautics and Space Administration, the Department of Health and Human Services and the National Science Foundation.

The universities expect some benefit from the increase in defence research, of which \$781m in 1983 will be devoted to basic research, much of which will take place in universities.

The Department of Health and Human Services will spend most of its \$2,000m basic research budget on biomedical research conducted in the national institutes of health.

A similar pattern of selective increases is contained in the budget proposals for the National Science Foundation, which accounts for near-



Dr Slaughter: 'priorities carefully viewed'

ly 30 per cent of all federal money provided to universities for basic research.

Its overall budget is to rise \$2m to \$1,033m in 1983. An additional \$6m will be allocated for facilities and equipment and spending on basic research would rise from \$912m to \$984m.

Announcing the distribution of funds, Dr John Slaughter, the foundation's director, said the budget had been developed in the context of President Reagan's economic recovery programme. "All activities and priorities were carefully reviewed to ensure that those included in the 1983 request would provide the largest possible return on the dollars invested in terms of a strong scientific and engineering knowledge base for the future."

Spending on mathematical and physical sciences is to rise 9.5 per cent and on engineering 9.8 per cent. The allocation for biological, behavioural and social sciences will rise only 6.1 per cent of the increase.

The budget request pinpoints the priorities for the foundation in 1983. They are improving research instrumentation; developing links between universities and private industry; reducing staff shortages in computer science and engineering; attracting women and minorities to science and engineering research careers; improving primary and secondary education in maths and physics.

Overseas News

Secret letter from Poland

Staff and postgraduate students at Bradford University's centre for modern languages have translated a letter from a Polish academic telling conditions at a provincial university after the declaration of martial law. The letter was smuggled out by a visiting language teaching assistant and passed to Madeleine Renouard, a lecturer in French at Birkbeck College, London.

Extracts are reprinted below with proper names omitted to protect the writer and colleagues at the university.

"Two days and two nights have elapsed since the event you know about. We woke up to find all telephone links had been cut. There was no way of making local calls and it was impossible to telephone to other towns. There was terrible confusion. Uninformed television newscasters continually repeated the same communique. Civil liberties have been suppressed. Some news reached us in the morning. Several people have been 'interned'. At one o'clock in the morning, following the best tradition established by our neighbours, police ransacked the Solidarity offices and arrested everyone they found on the premises. It is -8°C. They were not allowed to their coats - exceptional brutality. At the same time people who had been active in the Solidarity movement are dragged from their beds by special squads.

"Always the same scene over and over again: the door is forced in, broken down, tear gas, beating with clubs and bare fists, terrified children screaming as the father of the family is dragged away barefoot to the car waiting below. It's all over in a minute. The neighbours woken by the shouting rush to the door in time to see the car disappearing around the corner.

"It is impossible to draw up an accurate list of victims. The first and only piece of information we could piece together on Sunday morning put the number around 40. One professor was abducted from his home in the middle of the night while his wife was away. Their six children, the

youngest aged two, were left alone in the flat with the door broken down. His wife told me her husband had time to put on a shirt and a pair of trousers over his pyjamas, but was forced to leave without shoes. She ran after her husband with his shoes, but was pushed back. The commander of the militia told her to make up a parcel with her husband's clothes and leave it at the university. A militiaman would collect it. So far, no one has been.

"In the rector's office, in the university library and in the student hostel a number of groups consisting of about a dozen people barricaded themselves in, taking food and airbricks. The militia did not intervene because its forces were in action in the large factories which were also barricaded.

"News of what is happening in the town was passed on by word of mouth. There are rumours of a clash at the truck factory. Some Solidarity militants have taken refuge in a factory in the suburbs. They are urging people to strike, but the few leaflets they produce rarely reach the town. Despite the ban, crowds gather silent and threatening in front of the ransacked offices of our regional Solidarity branch. There are no private cars on the streets because there is no petrol. Supplies are in chaos. Nothing unusual in that. We have to walk miles to meet friends, get information, exchange views and make plans.

"General advice: don't sleep at home. Report for work, classes are cancelled. The rector's went to see the commander to protest against the arrests of university lecturers. They were arrested on the spot. After three hours they are released and call a meeting of senate (all this on telephone). Negotiation with the Senate meets. Negotiation with the strikers. They draft a protest which is signed by the entire student body and ancillary staff, but the strike will be dispersed. But in the student hostels there was no time to get away. Baton charges, arrests and destruc-

tion. Tensions were running high. The wife of a professor who was also arrested in the middle of the night broke down. She ran out shouting: 'Our best people have been taken - at least try to save the young ones.' The first signs of considered reaction are appearing. You can take a nation by surprise, but you can't break its spirit or bring it to its knees.

"All the big factories have been barricaded. The militia has them surrounded and launches an attack every few hours. Series of explosions, smashed windows. No casualties so far. But there again, who knows? Ambulance sirens can be heard everywhere. In civilian hospitals all patients fit to be moved are being sent home at no notice. To make room for whom? There's a ban on the sale of dressings in chemists.

"I have seen several students with bruises and swollen faces. Forty or so escaped and rejoined the workers in one of the barricaded factories. The students are very brave, and not only the men. Exhausted by the occupation which has lasted two to three weeks in universities and polytechnics, and in secondary schools as well. Extremely well organized, responsible, dignified and tenacious. Most of the teachers, myself included, were helping them day and night. Not only by being there. Everyone did what they could. I helped to organize food and clothes. You should have seen the young people listening to a lecture and heard the discussion that followed. They are very mature and very determined - an example to us all. The university authorities were unanimous in their support of the strike. We wanted to get a new law passed on higher education without any modifications or amendments from the Ministry. We also wanted the dismissal of a rector who had been imposed on us, a former colonel. Since the 13th we have had rector-commissars.

"I'll stop here. You have my permission to make known the contents of this letter, but don't reveal my name or my course. Try to help.

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Education minister Paer Stenbaeck

Row looms over budget plans

from Donald Fields HELSINKI

An apparent switch of resources to various provincial universities in Finland has led to a row over proposals for the higher education budget for the next decade.

The universities have responded to the ministry of education's plans for the distribution of resources with criticisms of existing criteria. But civil servants detect mutual jealousies and a clash of priorities between "old" and "new" intellectual centres.

The debate highlights the distinctive pattern of higher education in Finland, a country of 4.8m people that has always had faith in the value of formal scholarship. The authorities have granted university status to 17 seats of learning, currently with more than 80,000 undergraduates and about 5,600 staff. The ranks have been swelled by a number of remote centres - including Rovaniemi, on the Arctic Circle - planned in the ambitious 1960s, when decentralization was facilitated by expanding resources.

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Academic freedom in danger

from Craig Charney SOUTH AFRICA

Government action has prevented three British academics from coming to South Africa for research.

Two were denied work permits, preventing them from taking up university posts this year, while the visa exemption of the third was revoked.

Academics say these decisions reflect a new threat to academic freedom: the vetting of visiting scholars for political acceptability.

The three cases, which all involve men of liberal or left-wing views,

Dr Brian Willan, an editor at Longmans. He has written a study of the pioneering black South African journalist Sol Plaatje, but he was denied a work permit to take up a Witwatersrand University postdoctoral fellowship.

Mr Gavin Williams, fellow in politics at St Peter's College, Oxford, former South African and Rhodes scholar, he is an authority on Nigerian politics. He was denied a work permit to take up a fellowship at the Rhodes University Institute of Social and Economic Research.

Mr Colin Murray, an anthropologist from Liverpool University. He recently published a book, *Divided Families: the impact of migrant labour on Lesotho*. His exemption from visa requirement - normal for Britons visiting South Africa - was revoked, and he cancelled planned field research in the Free State.

The department of internal affairs, responsible for visas and work permits, refused to offer any explanation for its action in these cases.

A spokesman said: "The department does not advance reasons for decisions taken," he added, "the department is not prepared to comment in the criteria used in such cases."

Professor Charles van Onselen, director of the Wits African Studies Institute, says, "any one of these would have been disturbing, but all three are quite worrisome."

Professor P. D. Tyson, Wits deputy vice-chancellor, said he saw the government's action as a threat to scholarly freedom. "The university should have the right to judge whom to appoint."

Fears of political vetting are heightened by the treatment of other cases by government in recent years. Zimbabwe Senator Garfield Todd was refused a visa to deliver the academic freedom lecture at Wits last year.

The refusals are seen as part of official efforts to control the flow of ideas into South Africa as part of "total strategy" by the official opposition's education spokesman, Dr Alex Boraine, MP.

"Bearing in mind the government's obsession with the so-called 'total onslaught', it comes as no surprise that prospective visiting scholars are often denied entry or work permits. Nevertheless, it is very disturbing."

The moves suggest a return to the intolerance of the 1960s, when liberal scholars like the American political scientist, Miss Gwendolyn Carter, were denied visas.

Student loans 'were out of control'

The big cuts in student financial aid proposed in the 1983 budget were necessary because the government's main student loan system was spiralling out of control, the Department of Education said last week.

Mr Terrell Bell, the education secretary, told a news conference that \$2,500,000 - more than a quarter - of the 1983 federal education budget would be spent on the Guaranteed Student Loan programme.

"Despite cost-reduction measures taken in last year's reconciliation Act, the so-called uncontrollable entitlement costs of subsidizing loans to students while they are at school, and paying special allowances to banks and other lenders, have continued to grow dramatically," he said.

"In 1977 GSL cost the federal government \$267m; by 1980 the cost was \$1,600m; and unless Congress enacts significant changes in the programme the costs in 1983 will climb to \$3,400m - a growth of over 50 per cent in just three years."

In 1981 3.5m loans were made to students under the GSL scheme which was established in 1965. Under it, the federal government insures loans made to students by private lenders and subsidizes the amount of interest the student must pay. Students are automatically entitled to use the programme.

The 1983 budget proposal includes sweeping reforms in the GSL system designed to reduce the cost to the federal government. Postgraduate students would no longer be eligible for the GSL and would have to use a new loan scheme charging a 14 per cent interest rate instead of 9 per cent.

In addition, the charge made to students when they first took a loan would double from 5 to 10 per cent; all students would have to deposit financial need before qualifying for a loan and lenders would be allowed to charge the full market interest rate two years after students graduated.

The budget also proposes big cuts in the system of "Pell" grants established in 1972. Last year nearly three million students received the awards, which vary in value from \$200 to nearly \$1,700 depending on income.

Under the president's proposals the overall size of the Pell programme would drop from \$2,270m to \$1,400m reducing the number of beneficiaries and the amount of money they would receive.

However, one area of the higher education budget which is to be maintained at its 1982 level of \$130m is the federal government's assistance to developing colleges with low spending per student.

This includes most of the historically black colleges in the United States. Mr Bell said: "The president has not wavered from his commitment to these unique institutions which have long provided a means of access to higher education to many of the nation's most successful blacks."

Gene-splicing rules could be relaxed

Government regulations on gene-splicing research should be relaxed but not discarded, the United States principal advisory group on genetic engineering said last week.

In a review of the regulations imposed by the federal government on genetic research it sponsors, the group - the Recombinant DNA Advisory Committee - said that past concerns about the dangers of the research had been exaggerated and most experiments were relatively safe.

But the group decided to revise a decision it made in the autumn to turn federal regulations into a voluntary code. Public reaction to that decision revealed considerable anxieties about gene-splicing techniques.

"Scientists and other people want changes in the guidelines, but not setting aside the mandatory nature of the guidelines," said Dr Elene Nightingale, a member of the committee.

The safety rules have been modified and relaxed several times since they were imposed in 1976 amid widespread controversy.

Fear centred on the notion that by manipulating DNA to form new living substances, genetic researchers might inadvertently create virulent bacterial organisms against which man had no natural defence.

However, years of research have increased the sophistication of gene-splicing techniques without producing any dangerous incidents.

Now the committee has decided to retain some compulsory restrictions. Government approval will still be required for experiments which require recombinant organisms into the environment; make genetic drug resistant or enable some bacteria to become dangerous toxins.

Committee to defuse hostility to Pentagon

A new committee of university leaders and defence officials has been set up to defuse the growing tensions between academic scientists and the Pentagon.

Mr Donald Kennedy, president of Stanford University, and Mr Richard Delauer, undersecretary of defence for research and development, are to chair the new committee which is due to hold its first meeting later this month.

The committee will try to resolve a long-running controversy over the extent to which the defence and state departments should be allowed to interfere with the international exchange of scientific ideas developed on American campuses.

Stanford recently refused to comply with a State Department request to restrict the activities of Soviet robotics expert scheduled to visit the university as part of a visit sponsored by the National Academy of Sciences.

Both Stanford and the University of Wisconsin said the curbs the State Department had proposed for the visit were absurdly restrictive and could not be justified on its grounds of national security.

Two other universities have agreed to observe the restrictions on the scientists' visit. Last week the Massachusetts Institute of Technology announced that it too would refuse to comply with State Department restrictions on the forthcoming visit of a Soviet organic chemist, Mr Mikhail Goloboy.

A MIT spokesman said the government had asked the university to ensure that the visiting scientist would not be allowed to see any work on nutrition or genetic engineering.

The refusal of leading universities to comply with government-imposed restrictions has led the National Academy of Sciences to review its role in passing State Department orders to universities acting as hosts for Soviet scientists.

After a meeting with Dr Frank Press, the academy's president, Mr Kennedy told the Stanford senate: "I think the academy is determined to act as a useful and honest broker. I think there is some room for optimism that NAS will carry out that role in a productive way."

Overcrowding crisis in German medical schools

there are places for. The cases are brought by lawyers acting for students who were originally denied places under the numerus clausus system.

The medical department of Mainz University must cope with 70 students more than it has room for. The Free University of West Berlin is bursting at the seams with dental students. And the State of Bavaria is obliged by court order to make room for still more medical students.

The Mainz neurologist said: "I spend a lot of time persuading patients to allow groups of undergraduates to examine them."

For many years there have been severe limitations on entry to medical and dental schools in Germany, and places are granted only to those applicants with exceptionally good results in the *Abitur* (the rough equivalent of A level). A good *Abi* result, however, is no guarantee that a student will make a good doctor or dentist.

Arab university rejected

Israel's Council for Higher Education has turned down an application from the Committee for the Advancement of Arab Education to set up an Arab university in Galilee.

The council, chaired by education minister Ze'evulun Hammer, held three sessions to discuss the application. It concluded that the country has enough universities and that there is no justification for establishing a new one in Arab Nazareth.

Israel has six universities - the Hebrew University of Jerusalem, Tel Aviv University, Haifa University, Bar-Ilan University near Tel Aviv,

Court orders exam re-sit

India's Supreme Court has ordered the provincial government of Kerala state in south India to hold a fresh entrance examination for 4,000 candidates for admission to medical colleges affiliated to the state's two universities, Kerala and Calicut.

The ruling upholds an earlier Kerala High Court ruling. The Kerala government had appealed to the Supreme Court against the High Court judgment.

The case follows the manipulation of marks by large numbers of candidates taking the original entrance tests. Marks lists had been doctored in conniving and corrupt officials in both universities to enable candidates, who would otherwise have failed, to get admission.

Medical education is perhaps the most prestigious and lucrative course of study in India. Aspiring students (and their parents) are prepared to pay any price for a place.

Botswana University to go it alone

within 12 months to fund new faculties to fill the Lesotho gap.

Now Botswana University is to be independent from Swaziland as well. The rector, Professor John Turner, says there is no hostility. Good terms of friendship and cooperation would continue between the two countries, he said, and there would still be some exchange of students.

Professor Turner says an independent university will be more responsive to the needs of Botswana. This could be taken as a reference to frequent criticism of the university for the absence of a faculty of agriculture. A country in which 50 per cent of the population is involved in agriculture has had to send students

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Call for curbs on Mounties

Strict curbs on police surveillance of university campuses have again been called for by the Canadian Association of University Teachers in response to the recent McDonald Commission report on the Royal Canadian Mounted Police.

The 28,000 member association says the government should review the estimated one million security files on individuals who do not threaten the security of the country.

Calling for an end to extensive police activity in universities, it urges the federal government to make an explicit statement on the value of freedom of discussion as an essential characteristic of the liberal university and of a free democracy.

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As the Islamic revolution enters its fourth year thousands of Iranians who have been studying here face an enforced return to their strife-torn country.

# Iran's lost souls

## Students who flaunt the Islamic code put their lives in danger. David Jobbins reports



Iranian students hide behind their banners of protest for fear of retribution.

Reports of large scale executions and a crackdown on counter-revolutionary groups have fuelled the desire to remain among Iranians who came here in the final days of the late Shah's regime.

While asylum is being granted to the handful of ex-students who can prove their fear of persecution is well-founded, many more are likely to experience severe difficulty in renewing their permission to stay. They fall into two groups: those who cannot afford to continue their courses because of foreign exchange restrictions, and those who have completed their courses.

The Iranian government has made clear that students who have gained qualifications will not be allowed to register for new courses next year. Only those students with government backing will be able to leave Iran to study here next year.

Later figures for Iranians entering the country to study relate to 1980, the year the visa requirements were imposed. Then 2,000 were admitted - a dramatic fall from 5,000 in 1979 and nearly 9,000 in 1978.

Many middle class and professional people could see the writing on the wall for the Shah and took steps to safeguard their families. In many cases this took the form of settling here and in other Western countries allowing their children to embark on studies at colleges, polytechnics and universities.

They were welcomed with open arms in many public sector colleges, with courses organized around them in several instances. While not necessarily pro-Shah it was inevitable that they would be regarded with suspicion by Ayatollah Khomeini's supporters, particularly as his opponents in exile stepped up their propaganda campaign.

# Public good for the public eye

Last term, Glasgow University's department of social administration found itself in the glare of unsought publicity when its newly graduated students produced a document questioning the staff's integrity and professionalism, and accusing them of bias and prejudice.

The students had not mentioned any such problems to anyone during the two-year postgraduate social work course, and there seems every likelihood that the document was drawn up in retaliation for two of the class of 19 having been failed. The allegations were potentially extremely damaging, and had been sent to the Central Council for the Training and Education of Social Workers and the British Association of Social Workers as well as the new intake of students.

The university established a committee of inquiry and then, virtually matching the extraordinary behaviour of the students, refused to publish its conclusions. Such secrecy is bound to fuel suspicions of a cover-up, an unnecessary risk for the university to take since the committee agreed without reservation that the students' serious allegations were unfounded.

The committee did make recommendations, which were also kept secret by the university, but these are relatively minor, seeking a greater degree of formality in staff-student relations. For example, it said the first notification of success or failure must be a university newsletter on occasion, lecturers had to send students their results before the official list was posted.

It is very important for us not to overreact, says the head of department, Professor Frederick Martin. "Something went badly wrong with that particular class, and nobody quite understands why. But we have to be reasonably close to the students and work with them on any kind of learning difficulty. If we were to get rigidly bureaucratic, hiding behind a wall of rules and regulations, that would be disastrous."



Glasgow University: project on community help for the mentally handicapped.

A close relationship between staff and students is almost inevitable and certainly desirable in social work, which requires qualities over and above academic ability, making emotional as well as intellectual demands on students. Their personalities must be one of the tools of their trade, and they must therefore learn about themselves as well as acquiring knowledge from textbooks.

Ironically, despite the staff having been vindicated, they must conclude that there was some departmental failure, whether in the initial selection process which involves two personal interviews, or in the teaching itself, if their former students could be guilty of such a breach of ethics.

However, major innovations in the course this session have prevented staff becoming so involved in depressed post mortems that they fail to take advantage of the future. Professor Martin has introduced the concept of topic teaching to social work at Glasgow. Topic teaching emerged from North America as a new mode of medical education, with staff no longer remaining in their particular academic categories, but contributing to individual topics, such as the cardio-vascular system.

Although this was enthusiastically taken up, it was found to be very difficult to put into practice, perhaps because it is no simple matter to reshape an entire medical curriculum. But Professor Martin felt it could be used with success in social work with its smaller number of compulsory subjects. Fundamentally different things are not being taught, but the organization, and structure, have changed.

Instead of being given a series of lectures on law and social work, for example, students will cover the topic of mental illness, including the law on compulsory detention orders, along with the sociology and psychology of mental illness, or during a course on child care they will study the law covering removal of children from the home.

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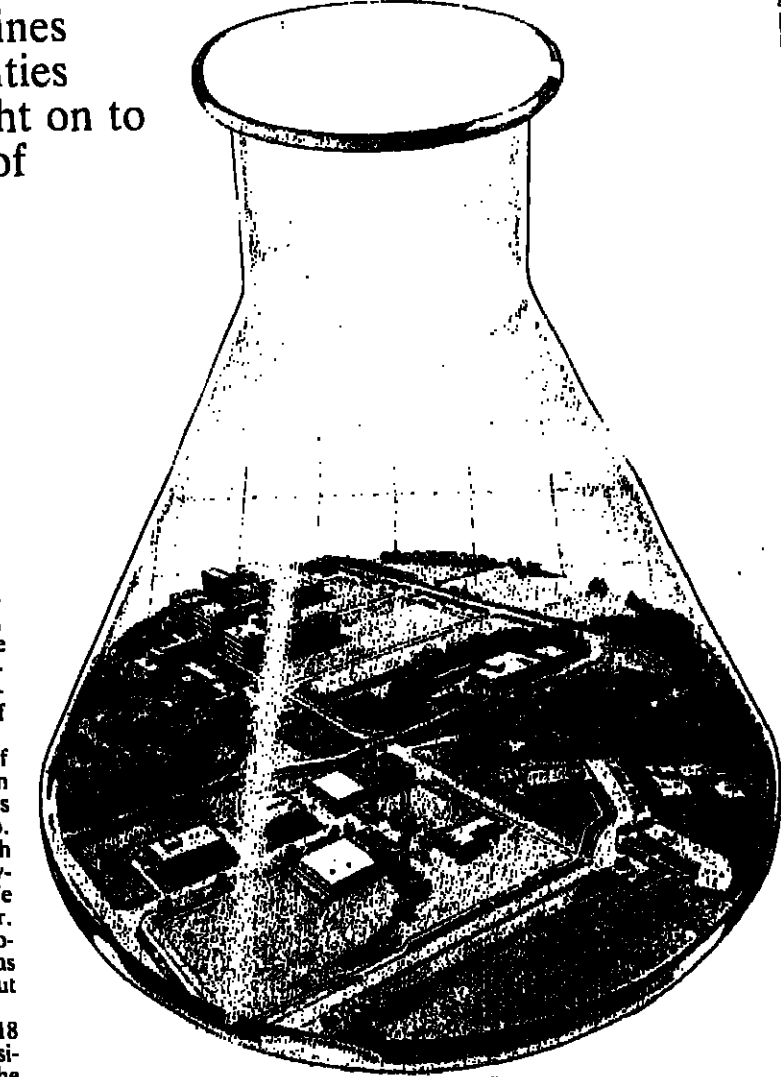
# Science is given more room to park

This week's official launching of Warwick University's science park represents the most recent embodiment of a trend which has suddenly become high fashion among beleaguered universities anxious to attract whatever cash they can. This sudden flowering of interest has seen announcements of plans to establish similar ventures in Glasgow, Liverpool, Leeds, Newcastle, Exeter and Southampton and there is certainly every expectation of more to come.

## Robin McKie examines how British universities have suddenly caught on to the American way of exploiting research

Ex-students wanting to stay in the UK must furnish the Home Office with evidence that if they return to Iran they have a well-founded fear of persecution. But organizations such as the National Union of Students, the UK Overseas Students Association and the UK Immigrants Advisory Service point out how difficult it is for individuals to provide this proof.

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Self-contained science: the Heriot-Watt research park

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Engineering Research Council to allow postgraduate students to carry out industrial research at Laser-Scan. "Often their work is at the very forefront of science and we get a lot of feedback from that," Mr Pratt said.

The company also takes small groups of undergraduate engineering students for two-day visits, to see their lasers in operation. "When they leave these students go out thinking of lasers as industrial processes and not just as the products of academic research."

A more intriguing, and far closer, relationship between university and company was reported by Professor Des Smith, head of Heriot-Watt physics department. Professor Smith is that rare creature - for British at least - who is both a senior academic and the managing director of a successful manufacturing company. Celebrating its tenth anniversary this month, Edinburgh Instruments came into existence with only five employees. Now it has branches in Germany and America, and plans to expand its annual turnover to £5m.

The firm makes lasers, this time for sensing, and each device is individually made, often taking more than three months to complete. It is a specialized market, nevertheless, Edinburgh Instruments has made strong inroads into European markets and shows every willingness to take on major American competitors at their own game.

The particular benefit for science departments at Heriot-Watt, Professor Smith believes, is that basic research discoveries, particularly those from its optics laboratories, are often transferred into technology for commercial development by Edinburgh Instruments. The resulting machinery is - not surprisingly - then perfectly tailored to suit the further needs of university departments, an important boost to their research aims and requirements, giving scientists there a vital head start in their work.

Given this start, researchers are then able to increase output, providing Edinburgh Instruments with more ideas - and so a constantly self-improving cycle is set up. Certainly, science (or research) parks from these examples must be considered a success and provided saturation within a local area is not reached, they offer a great deal of scope for expansion. Although no company involved in these parks has yet become bankrupt - which is no mean achievement given the high risk, advanced technology of their products and the present economic climate - there are still lessons to be learned.

It seems particularly important that some form of building or accommodation is provided, and this has been the crucial factor in the steady expansion at Cambridge. This would be especially beneficial for the new, small, innovative companies, launched by university researchers and which do not have the capital or time to consider building programmes.

For this type of firm, suffering from no lack of scientific expertise, there is more likely to be a critical deficit in business acumen, such as expertise in employment legislation, licensing laws and understanding of the finer points of marketing.

"There is a strong esprit de corps among the small companies, nevertheless it would be nice if there was a Big Daddy who could help them set up their firms for the first time," said Dr Bradford. More specifically, he suggested that in future science parks might establish nursery units where a central business adviser would operate, providing crucial timely expertise to a clutch of fledgling firms.

Olga Wojtas

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# Geoffrey Price considers how scientists see their responsibility to society

Debates about the social responsibility of scientists are strongly influenced by competing, and often possessive, notions of social order and justice, which I shall call physicalist, functionalist and voluntarist.

For the physicalist, the central principle of social order is the need to adapt to external conditions. Launching his "Cultures campaign" in the 1950s, C. P. Snow stakes his case for expanding scientific education, on the need for survival. "If the price of survival is to change our culture, most of us as individuals would pay more than that." In the 1970s, the influential article *What we must do by the environmentalist John Platt* urged that foreseeable crises in social institutions and natural resources be treated alike as the subject of crash programmes of technical development.

"In the past, we have had science for intellectual pleasure... for the conquest of nature... for war. But today the whole human experiment may hang on the question of how fast we now press science for survival."

The systematic exponent of physicalism is N. F. Skinner, for whom the existence of an empiricist science of human behaviour is the key to designing the interactions through which individuals and groups learn to their environment. *Walden Two* expounds the theme: "Men are made good or bad, wise or foolish, by the environment in which they grow." The physicalist will urge that the huge variety of tasks presented by changing circumstances define the responsibility of the scientist for the direction and control. "Being responsible" is defined in terms of the survival of individual or group within determinate conditions.

The physicalist paradigm has not only proved attractive to many scientists, it also embodies the modern tendency to think of responsibility as "making", to conceive politics as a practical "art", measured by success in bringing definite ideas into practice. Applied without differentiation to the natural and the social realm, this paradigm leads logically to the inclusive technical planning of Skinner. Work for all, the scientist's responsibility is as a specialist worker, and the only astrocyte is one of technique.

For the functionalist, by contrast, the central principles of social order rest on the sharing of common cultural principles, traditions and imperatives. The focus is on man as a social being, whose judgment of the response to changing conditions is formed and guided by loyalty to institutions whose goals are intended to ensure the coordination of specialized tasks. Thus the code of professional conduct of the Royal Institute of Chemistry declares that "chemists who recognize their fundamental professional duty to serve the public interest should bear in mind that this implies an obligation to take a positive interest in their social responsibilities... They have a three-fold responsibility... as intelligent citizens, as scientists and as specialists. They should not shelter behind the excuse that they are concerned only with the progress of their science."

The functionalist differs from the physicalist by defining goodness in terms of shared human meanings and commitments. "Being responsible" is defined in terms of the scientist's readiness to internalize those norms and goals which enable his peer group and wider community to function successfully. The underlying assumption is of the existence of a network of social purposes which underpin the "going concern" of existing activities. Clearly, the functionalist will have to consider whether, in practice, total harmony exists between the intentions of the different groups from which the scientist's loyalties are derived.

From some, the view will be put that the goals of the employer serve to define the terms of scientific practice; and some scientists will agree that their role is predominantly that of employee, tacitly assuming that the task of fitting their activity into any wider responsibilities is adequately dealt with by their parent organization.

More common is a moderate functionalist view. The "occupational perspective" is seen to be easily abused: each scientist has a social responsibility for the public image of science give rise



B. F. Skinner and C. P. Snow: the physicalist approach

# Is science a servant or a master?

to attempts to mediate between the differing social spheres of responsibility. Thus the moderate functionalist paradigm leads to efforts to draw up "codes of practice" which recognize the potential for conflict between the scientist's tasks as employee and the responsibility of professional to observe their own ideals of conduct and to be responsible to the community. The focus is on means of preserving or restoring harmonious relations between different social functions by legislative and administrative means: standards of good practice, appeal procedures, disciplinary tribunals and supervisory agencies.

Even the moderate functionalist position is open to the criticism that by seeking to reduce all struggles to influence in the practice of science to problems of institutional and personal adjustment, it overlooks the possible development of disagreements that give rise to power conflicts.

For the voluntarist, by contrast, the central principles of social order are the result of conflict and compromise between major interest groups. Man is not merely required to adapt to given cultural norms; as social actor, he must initiate strategic moves to restore equity in the power relations of society. "Being responsible" as a scientist involves recognizing the existence of conflict and seeking to redress it. As Winter points out, goodness is taken to be ensured by freedom from domination, allowing equality of representation to different interests.

As an example of a statement within the voluntarist paradigm, consider this extract from a submission of a World Council of Churches conference to the 1980 United Nations Conference on Science and Technology for Development. "You cannot start reforming the course and orientation (of science and technology) without in the same process radically altering the power-structures within which that development takes place... The liberation of science-technology from control by the few, and its deployment in the interests of humanity as a whole and especially of the poor, calls for a gigantic political-economic struggle."

In Britain, the voluntarist perspective became well known through its restatement, in terms of a Marxist political economy in J. D. Bernal's *The social function of science* in 1939. "The restricting and distorting forces which are at present working on science are inseparable from the whole political and social complex of capitalism. We shall not have a free and effective science as long as capitalism remains... In science and in the working-class movement are two great forces; but they need to come together to effect what is the purpose of both of them: the transformation and fulfilment of human society. This is voluntarism in an optimistic mood: anticipating the elimination of existing tensions between classes. Yet without a belief in such a pattern of history, the voluntarist may easily yield to pessimism or despair: who might claim to have seen others' high capacities of science are redeployed accordingly

contributions to humanity. By contrast, if the experience of ourselves and others as persons-in-relation is absent, then all concepts of responsibility, including the responsibility of scientists, will be ordered not to what people are, but to what they can do in terms of the exercise of power, service to communal goals and material productivity. The intentionalist perspective asks whether the political order, social institutions and the economy of production exists for man, or man for them? It suggests that unless our central concern is the advancement of human persons, we may correct abuses of responsibility for science at the successive levels of material exploitation, legal and administrative injustice, and distortion by sectional interest groups, and yet fail to care for the human persons we are dealing with.

If, by contrast, we believe that man is more valuable for what he is than for what he has, then the physicalist, functionalist and voluntarist paradigms can be set in due perspective. Certainly the contribution of the sciences to securing fair and sufficient access to the conditions of life is a primary responsibility; respect for persons is negated where food, clothing and shelter are inadequate. Yet responsibility in physicalist terms is limited by the succeeding task of achieving agreement on the function of science within the human spheres of meaning of the institutional and administrative order. Respect for the need of persons for cultural stability is negated if the structure of the economy is held to determine the requirements of all institutions. Nevertheless, stability in functional terms must itself be subordinated to the needs of justice at the level of power relations, if persistent conflicts of interest threaten to fragment communities.

The action of Arthur Miller's *All My Sons* dramatizes precisely this conflict. Joe Keller has hidden from his family for years the fact that under the stress of war-time manufacturing, he allowed faulty engine cylinder-heads to be shipped to the airforce rather than face the collapse of his business. Having shifted the blame at the trial onto his foreman, who was imprisoned after 21 airmen were lost, Keller concentrated on building up the business and handing it on to his family. For this he justified his action in terms of survival: "You got a process, the process doesn't work, you're out of business... What could I do, let them take 40 years, let them take my life away?" His wife is equally unwilling for the truth to be probed; they lost their eldest son Larry in a wartime plane crash, but for her the unity of the family is paramount, and so any question of a link with the faulty engines is forbidden. Between them, the parents effectively strive to keep ideas of responsibility within the strictest bounds of physicalism and functionalism.

But slowly the facts emerge, and Chris, the younger son, turns against accepting the lie built into the business he is meant to inherit. "What the hell do you mean you did it for me? Don't you have a country? Don't you live in the world?" Chris had learnt in wartime, the intentionalist love for persons, through watching the willingness of his men to die for each other. "I got an idea - watching them go down. Everything was being destroyed, see, but it seemed to me that one new thing was made. A kind of... responsibility. Man for man. You understand me?" Then Keller learns that even Larry, whom he had thought to spare the ethics of survival, had planned in shame that his father could go on trading when men were being killed daily. Finally, the implications of technical responsibility dawn on Keller. "Sure, he was my son," he says to Larry. "But I think to him; they were all sons. And I guess they were. I guess they were."

Thus the question whether the sciences and their technical consequences serve man or enslave him, ultimately depends on whether we experience and value ourselves and our neighbours as persons or as strangers.

The author is a lecturer in science policy at Manchester University.

# Will

The funeral of the Halifax Charities Ben Rushton, in 1853 was a major public and political event, an occasion for the expression of English radical patriotism. "The wish of the departed patriot," we are told, "was that no paid priest should officiate at his funeral."

Instead Ernest Jones, the man who was leading Chartism into socialism, spoke, in a long-remembered address, of "the humanity of a noble patriot." After the ceremony there was a mass meeting, petition Parliament in favour of the Charter. But the funeral was the key event of the day, the remembrance of a man whose life had been spent in opposition to the power of the English state and who had died in poverty.

Charists weep, and let your grief be true, A nobler patriot country never knew.

Rushton's funeral was one of the last occasions on which English radical patriotism could be voiced without ambiguity or strain. Ahead lay the Crimean War and the slow undermining of the tradition of radical patriotism to the point where, in the late 1870s, patriotism became identified with Conservatism. Radical was a period in which radicals instinctively believed themselves to be the true embodiment of English patriotism. The more radical they were the more patriotic they proclaimed themselves to be.

In the 1790s and in early Chartism radical patriotism was at its height. Patriotic clubs were formed (the famous London Corresponding Society was nearly known to history as the Patriotic Club), *Patriot* newspapers were published, patriotic songs proclaimed the virtues of the leaders. "The Lion of Freedom is come from his den."

We'll rally around him, again and again; We'll crown him with laurel, our champion to be; O'Connor the patriot: for ever liberty!

This tradition of radical patriotism dated back to the time of William Bolingbroke, had tried to legitimize their opposition to the Whig oligarchy by calling themselves patriots. Thus the Tory Samuel Johnson could describe a patriot in the 1755 edition of his *Dictionary* as "one of his ruling passion is the love of his country." It was a mark of change that 20 years later the famous radical produced that most famous radical's definition of patriotism as "the last refuge of a scoundrel." In the intervening years radicals had commanded them, the patriots effectively strive to keep ideas of responsibility within the strictest bounds of physicalism and functionalism.

# the real John Bull stand up, please

Conservatives have captured the banner of patriotism from its radical tradition, argues Hugh Cunningham

who identified themselves with the doings of the state, especially in times of war, felt themselves to be patriots. In the 20 years after Rushton's death this latter tradition emerged victorious. Radical patriotism was fatally weakened. The cause was not, as many have liked to believe, the rise of an internationalist socialism, but rather the channelling of the tradition of radical patriotism into the mainstream of the two emerging political parties, the Liberals and the Conservatives. The process was complex. Palmerston's support of constitutionalism abroad seemed to some radicals the fulfilment of England's providential role as purveyor of freedom to the world. Gladstone thereafter managed to convey an impression of himself as both crusader and pacifist, a combination which won many to his support. So the Liberal Party gained. But the Conservatives too were alert to the electoral opportunities. A deep-rooted Russophobia among radicals could impose some of them into supporting a policy of opposition to any signs of Russian expansion. Perhaps more important, the Conservatives portrayed themselves as hearty beer-drinking and Church of England John Bulls opposed to the weak-kneed pacifism and teetotalism of the chapel. The connotations of roast beef began to be conservative not radical.

John Bull himself was undergoing an important change in these years. As a cartoon figure John Bull emerged in the 1760s as the English nation imposed upon by the Scots. When he rose to wider fame, particularly at the hands of Gillray, during the French Revolutionary and Napoleonic wars, he remained "the people" into the armed services (though in crisis resolutely loyal), he had a staunch sense of his own rights. He was an anti-hero because his sturdy common sense alone enabled him to endure the burdens which government laid upon him.

The John Bull as portrayed by Punch by Leech and Tenniel in the second half of the century was a quite different figure; no longer the common man, he was now the super-common man, he was now the reminder of the governing class of the proper prime minister of the day. Trimmed down and spruced up, he had enjoyed a meteoric ascent of the ladder of class. Patriotism now lay in an identification with the concerns of government rather than in a suspicion of the power which lay in its hands.

In the late 1870s this shift from a patriotism whose characteristic stance was one of opposition to government to one which was normally struggling to fit in with a new Napoleonism worked for and identified. Disraeli worked for and achieved an identification of patriotism with one party only: the Conservatives. It was his enduring legacy, achievement as his party from its normal stance of opposition to Palmerstonian swagger to a nationalist policy of upholding British interests at all costs.

The occasion was the Eastern crisis of 1877-78; compared to which, according to Lord Salisbury, "no question within the memory of man had so deeply excited the English people, moved their passions so thoroughly and produced such profound divisions and such rancorous animosity." Disraeli forced a division within his own Cabinet, demanding that they choose between "the Imperial policy of England and the policy of crusade" (two contemporary terms) and his crisis diplomacy helped to unleash a phenomenon so novel that its victims sought a new word to describe it: jingoism. The man who told Disraeli in revealing detail the part which he had played in organizing jingoism was rewarded with a pocket borough at the 1880 general election, and set up with Liberal and Conservative party funds both a Patriotic Association and a newspaper, *England*. In the power of church and state he was an exemplar of a tradition of patriotism which had extraordinary potency over three-quarters of a century. It had not, of course, been unchanged, nor often dominant. Many Richard Oastler coined a new defini-



theme in Conservative Party propaganda has been the patriotism of the party set against the lack of patriotism of its opponents. But there have been changes in the content of that patriotism. In 1876 it was "the unpatriotic conduct" of the Radical section of the Liberal Party against which the National Union of Conservative and Constitutional Associations could not refrain from expressing its "strong feelings of indignation." In 1952 it was Peter Shore who was taken to task: "Large Shames of the British people," he was assured, "are not animated by class hatred or selfish personal greed, but are inspired by a sense of patriotism, duty and service, a love of country, its traditions and greatness."

By the 1950s, we can see, Conservative Party patriotism had shifted its emphases since the 1870s. It had become British, not simply English. It called for a sense of duty and service, by implication to the state. And it opposed itself not so much to an alternative foreign policy as to the politics of class. The role of patriotism in the twentieth century has been twofold. In the first place it has been invoked by politicians of all parties as the motive force which should impel people to sacrifice their personal interests, and often their lives, to the service of the state.

Secondly, it has been seen as the one secular creed which might persuade people, and in particular working-class people, to think in terms of nation, not of class. It is scarcely surprising that Conservatives should look to patriotism to achieve these important objectives; that the Liberal and then the Labour Party should follow suit is more worthy of note. "I am a patriot," declared the self-styled Peter Shore in his candidature for the leadership of the Labour Party.

Left-wing patriotism over the last century has in fact rarely been less than a feeble echo of the confident patriotism of the right. Occasionally we can discern traces of that earlier radical patriotism - most noticeably in a tradition of pacifism and internationalism. But governments, as opposed to parties, have been remarkably consistent in the role they have carved out for patriotism and in the weight they have placed upon it. The like-mindedness of governments called in the later nineteenth and early twentieth centuries for a common view of English history. In the new era of mass education in history, properly taught, might instill patriotism. Our main safeguard against a revolution," wrote the Reverend J. A. Picton in 1872, "was the patriotic love of one's country, arising from a knowledge of the past, leading men to see how much preferable a gradual reform was to violent changes." Such hopes were soon disappointed. Children were slow to learn, sometimes recalcitrant. A girl upon to wrap herself in a Union Jack and recite a patriotic poem while standing on an elementary school desk, was not confirmed in patriotism but converted to socialism.

The echoes of that radical patriotism can still be heard today, though we rarely listen for them. In the first half of the nineteenth century, however, it was not only a Ben Rushton who embodied the traditions of radical patriotism. In very different circumstances the Artful Dodger, making his appearance before the now-forgotten summary justice of a London police court, knew instinctively the role that was expected of him: "I am an Englishman, ain't I?" he asked, "where are my privileges?" It is a question which, in the 1980s, is once again being asked. The author is a lecturer in the faculty of humanities at the University of Kent.



# BOOKS

## From freedom to serfdom

by Averil Cameron

The Class Struggle in the Ancient Greek World: from the Archaic age to the Arab conquests by G. E. M. de Ste Croix Duckworth, £38.00 ISBN 0 7156 0738 3

Geoffrey de Ste Croix is unusual among English-speaking ancient historians in being not merely a committed Marxist, but, in his view, a more correct one than most others who claim the name. In his long-awaited book he offers an analysis of the ancient world in terms of class struggle, and claims that this is the paramount method for interpreting historical change. Thus he rightly presents ancient history in the context of history in general, and within his chosen field he aims to deal with the most major problems.

But this is no conventional Marxist history. De Ste Croix accuses most Marxist historians of having "seriously misconceived" Marx's conception of class struggle. According to him, class struggle is the "collective social expression" of exploitation, and is present wherever there is an unequal relation to the means of production, whether or not the exploited are taking overt action against their condition, and whether or not there is even consciousness of class or of struggle. On this weak definition, however, nearly every society will be in a state of class struggle. Surely, therefore, even if correct as an interpretation of Marx, which is doubtful, de Ste Croix's conception of class struggle diminishes the usefulness of the idea as a tool of analysis. Because he interprets it in this way, he need not (and does not) concentrate on the class in the ancient world where there was open conflict, not even on the slave revolts which are usually central to Marxist analysis.

De Ste Croix defends his interpretation at vast length and with a good deal of verve, and it is obviously important to him to demonstrate that this is what Marx actually intended. Those historians who still want to retain an element of "class consciousness and active political conflict" in their understanding of class struggle are treated to a sustained polemic. Indeed, the book reads at times more like a personal memo than a formal argument. Yet many would deny that "class" itself is strictly applicable to the ancient world, and would prefer to describe it in terms of social status, a mode of analysis which de Ste Croix totally rejects (Sir Moses Finley's very influential book *The Ancient Economy* [1973] is held to exemplify the arguments of those who have "seriously misunderstood" Marx).

It is not only in its use of Marxist terminology that the book reads oddly, but in its frame of reference too. De Ste Croix identifies his subject as "the ancient Greek world", when he is really writing of the Roman empire up to the seventh century. Indeed, one of the major themes of the book, as we would expect from a work of these sympathies, concerns the reasons for the end of the empire and classical civilization. Chronologically, de Ste Croix covers the whole range of classical antiquity, from fifth-century Greece to the rise of

Islam. But geographically he concentrates on the Greek-speaking eastern Mediterranean, which of course became part of the Roman empire. In so far, however, as Rome itself exerted a manifold influence over the areas which it governed, it could not be kept out of the book altogether, and there are even sections about the Roman Republic. In general, though, the focus is on the Greek world and, later, the Greek part of the Roman empire.

This limitation is bound to seem perverse, and involves important omissions; nor is it easy for the reader to grasp. It surely derives, like much else in de Ste Croix's approach, from A. H. M. Jones, through whom he came to ancient history (they met during the war), who established the idea of the continuity of the Greek world in his earlier books and who dealt with the end of the empire in his largest work, *The Later Roman Empire* (1964). In that work, Jones placed the collapse not with the conventional "fall of the western empire" in AD 476 but, like de Ste Croix, with the crumbling of the eastern empire in the late sixth and early seventh centuries.

Still, the important test is whether de Ste Croix's approach does in fact explain historical change, as he claims. On early Christianity, certainly, he is a disappointment, not merely because of the extreme anti-Christian tone, which will immediately antagonize many of his readers, but also because when not presenting Christianity as an antiquarian oddity he sees it solely in terms of hierarchy and social control: the Christian governing class after Constantine simply took over from their pagan predecessors the task of keeping the lower class in order. But we are not told how or why Christianity came to prevail, or how the religion of the lower classes and the countryside became that of the ruling elite. This is all the more disappointing when the author has written so well about it elsewhere, and when he knows the Christian texts so unusually well.

There was a sense in which this adoption of Christianity by the government of the empire was accompanied by social changes within the ruling class, as new men were promoted for their adherence to the new faith. Christianity could thus be an instrument of social change, not merely a way of reinforcing the existing social order. De Ste Croix has preferred to present it in stark terms as an ideology underpinning the domination of the powerful. But there was always another side to it: its well-known attraction for women, for example, and the new possibilities which it offered some of them. In the fourth century, there was growth and development as well as oppression; and most of the innovations involved the adoption of Christianity. De Ste Croix's view is one-sided and simplistic. We would not expect him to allow a serious place to belief in his analysis of the working of late antique religion, yet by failing altogether to consider its content, its overtones and complexities with late paganism, he has denied himself the opportunity of understanding its place in the transition from the classical to the medieval world.

This is a basic matter of historical approach, and those on the other side of the divide will not be convinced by de Ste Croix's book. On the question of the fall of the Roman empire, however, the situation is rather different. Here he tackles the problem directly, and we can therefore ask whether the explanation given is wholly convincing. Yet again it is a partial view, leaving out of account factors not directly concerned with the class struggle - the crippling burden of the army, for instance, and the impact of successive invasions. De Ste Croix presents the story of the "disintegration of large portions of the Roman empire, culminating in the losses to the Arabs" in the

early seventh century, as a story of gradual decline from freedom to virtual serfdom. The decline of slavery in the early empire, he thinks, necessitated greater and more effective exploitation of the free population by way of compensation, while military efficiency declined because the army was no longer a citizen army committed to defending its ideals. By the seventh century AD, when the eastern empire faced Persian as well as Arab attacks, there was demoralization and disaffection among the provincial populations; cities had all but collapsed, and large sectors were alienated from the government in Constantinople through their adherence to the Monophysite heresy, as well as by the intolerable fiscal burden.

Some of the best parts of the book are those which chart this depressing decline. In de Ste Croix's Roman empire, it was not a matter of a change for the worse from the idealized Antonine Age of Edward Gibbon to the harsh bureaucratic rule of the later Roman Empire, but rather a steady and unchecked slide into "enservement", by which he means the loss of legal rights by the free peasant population. This process was well under way in the first two centuries AD, but received its greatest impetus under the Christian rule of Constantine, when laws began to be enacted reducing the status of *coloni* (peasant tenant-farmers) virtually to that of serfs. They were tied to their estates and by law could not by their landlords. At the same time there were continuous and concerted attempts to curtail by law the freedom of the decurion class who were responsible for paying the heavy taxes in the cities.

Yet there was a gap of several centuries between the completion of this process of "enservement" by the end of the fourth century and the end to which de Ste Croix wants it to lead in the seventh. And there were always exceptions, men who made their way from quite obscure beginnings into the ruling elite. Under Justinian in the sixth century, not all that far from the final collapse after all, the imperial administration, and with it personal power, was open to anyone clever and ambitious enough to thrust himself forward. Nobody now thinks that the elaborate laws by which emperors after Constantine sought to prevent people from changing their occupations and guarantee their tax revenues were ever silently repealed. As for demoralization and disaffection, although de Ste Croix evinces an impressive amount of evidence of disloyalty among soldiers and civilians in the sixth and seventh centuries, it is in fact far from certain that the empire was then on the verge of collapse. His idea that military efficiency declined since the army was no longer a free citizen army seems to be a hangover of romantic ideas of freedom and political commitment. In fact quite small forces under Belisarius in the sixth century were capable of notable victories on the field, and it would hardly be possible to prove that where the sixth- and seventh-century armies were unsuccessful, it was directly because of the "disaffection" of the peasantry, as claimed here.

Archaeological evidence (not to the fore in this book) tends to show that there was economic growth in some areas in the latter part of de Ste Croix's period, and does little to support a theory of gradual decline from the fourth century on. To take one example, the huge amount of church building, restoration and decoration that was carried on in most of the eastern provinces in the fourth, sixth and seventh centuries (Palestine, and North Africa are particularly good instances) can be taken just as easily (and indeed more plausibly) as indicating vitality and local prosperity as it can as showing the support of Christianity for the dominance of the governmental hierarchy. When



Lion of Amphipolis, of the fourth century BC, taken from Macedonian Greece by John Crossland and Diana Constance (Batsford, £8.95).

archaeology does begin to indicate faltering decline, from the mid-sixth century in some cases, it is as likely to be due to the great plague and constant warfare of the sixth century as to class factors. And when the empire in parts and as a whole finds itself less and less able to maintain its integrity against outside pressures, it has to be at least partly because the peoples outside the empire, whether northern barbarians or Arabs, have been developing independently of the Roman state.

It is probably true that the deepest problems of the later empire were economic in origin: the simple inability of a traditional society without technical advances to control effectively a vast and complex empire under military pressure from without, or, in de Ste Croix's words, to exact an adequate surplus. But this conclusion did not need a class analysis; for example, A. H. M. Jones characterized the troubles of the late empire as having to feed "too many idle mouths" - in other words, there were too many consumers relative to what the producers could produce. A standard Marxist response to this observation has been to claim that the institution of slavery inhibited the technological advance which could have saved the situation - as though Rome was just waiting to rush into the industrial revolution.

De Ste Croix does not make the crude mistake of exaggerating the number of slaves in the agricultural economy of the later empire: though slavery is a crucial factor in his analysis of the final collapse, its decline (for whatever reason) making necessary an unacceptable degree of exploitation of the free population. In accord with this theme, according to which slavery declined (though at

an unquantifiable rate) in favour of the practice of letting or leasing the land to tenants, probably from the first century, de Ste Croix is in agreement with many of the non-Marxist historians whom he castigates, and indeed, one often under the theoretical apparatus. It becomes clear, for example, that the decline in freedom in the Greek world he deplors is a decline from an ideal of democracy. Centralized government is for him a self-evident evil, leading to increased pressure on the lower classes, whom he occasionally idealizes as yearning all the time for political expression.

The truth was probably somewhat different. The society of the later Roman empire was highly stratified and class conscious, but it was not, needless to say, a society in which much serious protest went on. Its dominant literary and intellectual expression was panegyric, the equivalent of the ceremony which pervaded all areas of life. Yet de Ste Croix is too sensible on the whole to press too far such signs as there are of "peasant revolts" or of religious movement interpreted as social protest. He is in fact a purist in every sense, more deeply influenced, perhaps, than those immediately preceding him of conventional scholarship.

This is in many ways a marvellous book. The author has made it far more difficult than it need have been, and too easy to criticize. Yet his sharp and uninhibited comments make it good reading, at least in parts. And above all, it wrestles with the major problems of the character of ancient civilization. Few ancient historians are brave enough to attempt what de Ste Croix has done, and that is a pity.

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## BOOKS Shelley's fortunes

Essays on Shelley edited by Miriam Allott Liverpool University Press, £12.50 ISBN 0 85323 294 6

Thirty years ago Frederick Pottle proposed the case for Shelley but accompanied it with a reluctant prophecy: "The disesteem of Shelley is going to become general and it may continue for a century or more."

Happily, if surprisingly, the oracle was misinformed: the last twenty years have seen a remarkable resurgence of interest in Shelley and a new, informed appraisal of his poetic virtues. Though the damage caused by the narrow trenchancies of Leavis and the willful tactlessness of the New Critics has not been entirely repaired, Shelley has attracted the serious attention of a number of distinguished scholars and critics and he enters the 1980s with his reputation remarkably high.

Reliable texts are at last (and somewhat belatedly) being established; biographical inventions have been checked, to some extent, and a more complex personality has been discovered; the political context has been painstakingly established; fact has been substituted for myth. Above all, the poetry is now being read with the serious and informed attention which it deserves and Shelley is recognized as the passionately intellectual poet which he was. Complexities and ironies and structural patterns which eluded the New Critics, partly because they chose to concentrate on lyrics, are now acknowledged and explored. It even seems that a hundred years after *Prometheus Unbound* was a "sacred book" for the young Yeats, Shelley's longer poems may provide some holy texts for the structuralists and the deconstructionists.

This new book of essays from Liverpool University makes some interesting contributions to this movement but it hardly justifies the claim of the dust-jacket that it forms "an entirely new critical interpretation of the works of Shelley... whose literary achievements have been neglected by critics in recent years". It should more properly be seen both as a sign of the growth of interest in Shelley and in some ways as a continuation of inquiries already begun. The range is wide but by no means comprehensive. A good deal is taken for granted; in spite of the inclusion of a chronology of Shelley's life, a new reader might find himself unsettled by the absence of landmarks and sometimes by a lack of reference to works under discussion. In similar fashion, the perfunctory bibliography offers little help and includes no articles published since 1969.

Collections of essays notoriously tend to be uneven in quality and this is no exception: the unevenness is matched by an uncomfortable variety in the length of essays. Four of the ten essays are rather brief, in contrast to the remaining six. The short essays (which include a treatment of Shelley's magnanimity by Kenneth Muir and a promising approach to the *Letter to Maria Gaborne* by Ann Thomson) tend to give the impression of being put together rather hastily or with too much frugality. The longer essays include several pieces which are impressively dense and detailed, but it is hard to avoid the feeling that some of them are overweighted while others are compressed versions of topics which require even further space. For example, a lengthy essay by David Seed on Shelley's Gothic novel *St Irvyne* is not content with analysing this highly revealing black flower of Shelley's youthful psyche but finds it necessary to invoke his other excursions into fiction, even though they cover a considerable range, both in style and subject matter.

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## Loosely based

The English Novel and the Movies edited by Michael Klein and Gillian Parker Frederick Ungar, \$14.95 and \$6.95 ISBN 0 8044 2472 1 and 6358 1

Critics of the work of Screen have concentrated their complaints upon the use of an opaque, neologistic vocabulary, the deployment of Marxist, semiotic and psychoanalytic categories, the preoccupation with such issues as sexual difference and the "interpellative positioning" of the viewer as subject.

Such critics might seek reassurance from this volume that it is indeed possible to write about film in a familiar, conventional literary-critical way, emphasizing plot and character, moral theme and aesthetic achievement, and avoiding any complex methodological or ideological problems. But the result is some three hundred pages of tepid tedium.

Partly for editorial reasons. Twenty-seven essays cover filmed versions of English novels from *Robinson Crusoe* to *Finnegans Wake*. The chronological order, according to the dates of the novels, confronts the consecutive reader with such unilluminating sequences as: *Leavis's 1946 Great Expectations*, Schlesinger's 1967 *Far from the Madding Crowd*, Mamoulian's 1932 *Jekyll and Hyde*, Huston's 1975 *The Man Who Would Be King* and George Pal's 1960 *The Time Machine*. Arrangement by issues or methods might at least have nudged the collection towards a more challenging coherence.

The broad coverage forces the essays into crippling brevity. Contributors tend to provide cursory opening remarks, summarize novel and film, then gesture towards an analysis there is insufficient space to justify. Too many resort to impressionistic description of scenes or sim-



From Jack Cardiff's adaptation of "Sons and Lovers" (1960).

ple précis of sequences, leaving the reader to translate overall accounts into the specific recall of particular shots. Despite the inclusion of a still from each film no essayist uses one as a focus for detailed comparative analysis with, say, a quoted passage from a novel.

More fundamentally, few contributors probe the comparison between film and novel to illuminate anything other than the particular comparison itself. The processes of "simplification" (mainly of sexual or political material), frequently remarked upon, are never genuinely intricate issues but are rather attributed to the personal priorities of each film-maker or to anecdotaly defined "commercial" pressures. Only one essay adequately elaborates an arguable general hypothesis to explain the particular problems of an adaptation (Sarah Smith on the absence of "double articulation" in film, to clarify the incompatibility between the *Wake's* language and any visual rendering of it). Despite various appeals to the technical difference between films and novels, the feeling is, curiously, that the best film should, after all, exemplify the same kind of qualities as great prose fiction - defined within a moral-realist aesthetic.

That perhaps is the basic misconception, one embedded not only in the literary-critical approach to film but in the dominant development of cinema itself: the urge towards transparent realism, the self-effacement of the material processes of film as only a "medium". Narrative film has probably perpetuated the questionable preconceptions of literary realism at the expense of its own specific potential. The films of Eisenstein other than the particular comparison itself, the processes of "simplification" (mainly of sexual or political material), frequently remarked upon, are never genuinely intricate issues but are rather attributed to the personal priorities of each film-maker or to anecdotaly defined "commercial" pressures. Only one essay adequately elaborates an arguable general hypothesis to explain the particular problems of an adaptation (Sarah Smith on the absence of "double articulation" in film, to clarify the incompatibility between the *Wake's* language and any visual rendering of it). Despite various appeals to the technical difference between films and novels, the feeling is, curiously, that the best film should, after all, exemplify the same kind of qualities as great prose fiction - defined within a moral-realist aesthetic.

Bernard Sharratt is lecturer in English at the University of Kent.

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# BOOKS

## Model physics

Particle Physics and Introduction to Field Theory by T. D. Lee  
Harwood Academic, \$59.50 and \$19.50  
ISBN 3 7186 0032 3 and 0033 1

When I was a student Sir Rudolf Peierls impressed upon me the importance of testing the order of magnitude of a theory's consequences before spending weeks in detailed, possibly fruitless, calculations. Sir Rudolf is one of the associate editors of a new series "Contemporary Concepts in Physics" of which T. D. Lee's book is the first volume. As such it has set a high standard.

This 800-page work grew out of lectures that Professor Lee gave in the spring of 1979 in Beijing, China, and among other delights I, and presumably Peierls, particularly enjoyed his chapter on "Order of magnitude estimates". In this chapter Lee uses simple physical considerations and dimensional analysis to obtain estimates of the radius of the hydrogen atom, the size of hadrons and hadronic cross sections, electron-positron annihilation, and other processes that are important in subatomic physics.

This chapter should be compulsory reading for modern theorists. A frequent criticism made of modern students is that although they are experts in the mathematics of gauge field theories, which is where the immediate future of high energy physics theory lies, they often have little or no conception of the physics. This is bad because if and when things appear in the present theoretical edifice it will be important that the mathematically trained gauge theorist recognizes them and knows what to invent next. This chapter on order of magnitude estimates will be an excellent first step for developing his physical intuition.

He could do well to read much more in this book, which devotes its first 150 pages to field theory. Here are introduced scalar, spinor and vector fields, Feynman diagrams, and quantum electrodynamics, and the section concludes with 40 pages on solitons including interesting ex-

tracts from the original 1842 paper by Russel and Rayleigh's 1876 work. We then meet particle physics, the chapter on order of magnitudes naturally coming first. There follow discussions of symmetries, time reversal and CPT, quark confinement, quantum chromodynamics (QCD) and gauge theories, quark model of hadrons, weak interactions, weak and electromagnetic gauge theory, parity model, chiral symmetry, QCD jets, and outlook.

Although the book is very long, the range of topics is so vast that some topics are necessarily dealt with in less detail than might be wished for. The paragon model is dealt with in less than 20 pages; little new is presented here and much less than in existing texts or lecture notes. Nothing on quark fragmentation is mentioned, yet this is important in the phenomenology and of interest in the QCD comparisons at present.

This is not a book from which to learn the paragon model, although field theory (QCD) developments

are dealt with in some detail and are not easily found elsewhere at this pedagogical level. The discussion of the quark model, in particular, is heavily biased towards Lee's own perspective on the big models. For workers interested in big models this is a highly stimulating and well written chapter but I am less impressed with it as an introduction to the general features of the quark model per se. However, on field theory and its modern applications to particle physics this book will undoubtedly make a major contribution.

Professor Lee is one of a handful of physicists whose discoveries, notably parity violation, will endure. A major work by such a man merits the attention of any serious student of the subject and should be available in every physics library.

### Frank Close

Frank Close is a principal scientific officer at the SRC's Rutherford Appleton Laboratories, Didcot, Oxfordshire.



Samuel Taylor Coleridge

## Digital circuits

Fundamentals of Computer Logic by David Hutchison  
Ellis Horwood: Wiley, £17.50 and £5.90  
ISBN 0 85312 258 X and 305 5

The stated objective of this book is to cover the structure of digital computers through a study and understanding of their basic circuits, beginning with elementary digital circuit concepts and building up towards the understanding of complete computer structures. However, from its title and overall length, the reader should not expect it to deal in depth with the complexities of complete computer architectures, or the subtleties of the interaction between hardware and software engineering.

The first of six chapters provides an adequate but brief introduction to the basic structure of computers in a concise descriptive manner. Specialized terminology is introduced and defined, and the structure of the generalized von Neumann machine, representing present-day computer structures, is outlined.

The author then concentrates on what would seem to be his main interests, digital logic circuits and digital logic design. To a large extent, this material can be found in a vast number of other undergraduate textbooks, so that it is difficult to define exactly where this text can supersede its very many competitors. As the reader is not likely to be burdened by excessive mathematical formalism, perhaps its greatest asset is "readability".

The basic digital logic gates of not, and, and, or, nor, and exclusive-or, together with the rules of Boolean algebra, are introduced in chapter two. It is a little strange, however, that although the exclusive-or gate is specifically covered, its complementary partner, exclusive-nor, (frequently the more convenient to use) is not mentioned. Similarly, there is no reference to algebraic expansions for combinational logic which involve the increasing significance of an aspect of increasing importance: commercial digital logic families, such as Transistor-Transistor-Logic (TTL), are also introduced, but coverage is extremely brief. An appendix reprints certain commercial TTL data sheets.

Chapters three and four, comprising almost exactly one half of the book, cover basic design methods for simple digital logic networks, both combinational and sequential. Xilinx's logic maps, the Quine-McCluskey minimization algorithm, state diagrams, and other basic techniques are introduced and used in simple design exercises, such as may be found in most other teaching texts.

Chapters five and six attempt to revert to an emphasis on digital computers, as distinct from general digital logic design. Chapter five, on computer logic circuits, concerns itself largely with block diagrams, covering registers, the central processing unit, and associated aspects. Chapter six, on the hardware-software interface, is a very short but useful chapter listing the various levels of consideration which go to make up a complete computer system, ranging from the human operator input level down to the final hardware circuits level. As this complete chain involves the man/machine interface, high-level languages, various stages down to the machine code language, microprogramming of the machine code data, and final hardware circuitry, it is obvious how difficult it is to do justice to all these topics within a single one of a digital circuits book than a digital computer book, for someone concerned with the other side of his world. For someone already concerned with hardware, however, not so much will be gained from this particular text.

Within the terms of his thesis Levere is, of course, correct, and his evidence is always fascinating, and which reveals a much more seminal aspect of Coleridge's scientific thinking: that of the relationship between nature and the human mind, which both imposes its structures, and simultaneously seeks their confirmation in that which is beyond itself. It was this symbolic language of nature that was to be the most distinctive contribution of Coleridge and (in this) his pupil, Wordsworth, to the development of nineteenth-century "science", speculative, fanciful, and often plain wrong-headed - found its true fulfilment.

Stephen Prickett  
Stephen Prickett is reader in English at the University of Sussex.

A third edition of D. R. Brothwell's *Digging up Bones: the excavation, treatment and study of human skeletal remains* has been published by Oxford University Press at £8.95.

S. L. Hurst  
S. L. Hurst is senior lecturer in electrical engineering at the University of Bath.

# BOOKS

## EDUCATION

### Put to the test

Discipline and Moral Education: a survey of public opinion and understanding by John Wilson  
NFER-Nelson, £10.95  
ISBN 0 85633 233 X

It would be hard to say whether John Wilson is best known for his extensive writings on moral education or for his trenchant criticisms of educational research. *Discipline and Moral Education* brings together both of these concerns. In reporting a survey of public attitudes to those topics which arguably generate most heat in discussions about the current state of schooling, Wilson intends to demonstrate how research into educational issues ought, at least initially, to be conducted. If this book bears little resemblance to what we have come to expect from publications of educational research, its author would no doubt cry, "So much the better".

The inquiry reported in *Discipline and Moral Education* was carried out part-time over a period of eight years by an eclectic group of teachers and students united by their "serious concern" for those topics, and by their commitment to conceptual rigour. This group was members of public funding, its members remain anonymous and all primary data were destroyed before publication of their findings.

Since the purpose of the research was to find out whether subjects had "a clear understanding" of discipline and moral education and to discover why these were not "properly understood and practised", a conceptual inquiry by the research group was seen as an integral part of the research. The results of this inquiry form an important part of the book and restate the case, argued more fully elsewhere by Wilson, for a conceptual connexion between human institutions and legitimate authority, and for a set of cognitive prerequisites for good reasoning in questions of morality whose acquisition and exercise should constitute moral education. Though many people would endorse the view that much research (and practice) in education is vitiated by insufficient attention to conceptual questions, far fewer would share the belief that conceptual clarity of itself contains the solution to educational problems.

It is this belief, together with Wilson's conviction that poor reasoning is caused less by ignorance or by defects of intelligence than by psychological aberration, which dominates both the book and the "survey of public opinion and understanding" it reports. Twelve hundred interested parties - parents, teachers, pupils, academics and administrators - were interviewed informally to ascertain the adequacy of their grasp of the key concepts, the causes of their misunderstanding and consequent bad practice, and the means by which these might be remedied. The respondents were classified by four factors guessed to be causally associated with their level of understanding, namely exposure to educational theory, experience of leadership, intellectual mindedness, and "intellectual autism" or unwillingness to tackle the problem appropriately, as well as by age, sex, type of school and social grouping.

Findings of the discipline survey include the suggestion that "indiscipline" arises from teachers' emotional reluctance to act authoritatively and impose the sterner sanctions which parents and pupils would welcome. The breakdown of discipline should be tackled by educating people - and particularly teachers - to understand the rational basis of authority, and by giving to state schools the sort of autonomy enjoyed by independent schools. Findings of the survey on moral education suggest that though there is systematic confusion about the aims and procedures of moral

education, the "vast majority" of respondents can, with a little help, understand the notion of a procedural approach to moral reasoning and would welcome courses and teaching materials to put this into practice. The solution of educational problems in a rapidly changing social situation is a complex task made more difficult by our propensity to fall or seem to fall into simple solutions. It is a pity to see a writer who has done much to oppose the exaggerated deference paid to the "facts" of empirical research making in his turn inflated claims for the prescriptive implications of conceptual clarity. Rigorous speculative reasoning and painstaking attention to social and psychological facts must proceed together to provide our only approach to the solution of practical problems. While it is true that professional empirical researchers have no monopoly of truth, neither has the conceptually enlightened amateur.

Ruth Jonathan  
Ruth Jonathan is lecturer in the philosophy of education at the University of Edinburgh.

Back to basics?  
Education for Development or Underdevelopment? Guyana's educational system and its implications for the third world by M. K. Bacchus  
Wilfrid Laurier University Press, \$15.00 and \$8.00  
ISBN 0 88920 084 X and 085 8  
Education and Development in Africa by A. R. Thompson  
Macmillan, £14.00 and £4.95  
ISBN 0 333 30018 1 and 30020 3

The importance of Bacchus's book to students of third world educational development is that it is the only comprehensive scholarly account of the Guyanese educational scene in English. Even more important, in the light of recent criticism of "first world" monopolies in writing and publishing on third world matters, its author is an eminent Guyanese academic who has worked in the country's Ministry of Education.

Bacchus describes the evolution and expansion of the Guyanese school system from colonial times to the present day. His analysis documents the massive increases in educational provision in Guyana from primary to university level. However, despite the commitment of policymakers to racial integration and equality of opportunity, the equal system itself has, unsurprisingly, perpetuated social elitism. Bacchus contends that schools and universities in Guyana work in favour of the haves and to the disadvantage of the have-nots. The examination system is biased towards children from educated and wealthier families. Children of the poor rarely reach the higher rungs of the educational ladder. The remedy, Bacchus suggests, lies outside the education system. If the differentials in pay between prestigious white-collar jobs and the manual and agricultural jobs in the traditional economy were reduced, then, passing examinations would be less important and schools could be used for education rather than occupational and social selection.

The final chapters of the book are particularly useful in relating the Guyanese situation to that in many other third world countries where the problems are similar. In this book Bacchus describes the social and economic conditions necessary for schools to become tools of social justice. His next book needs to outline the implications for the curriculum, school structure and the training of teachers.

For Kazim Bacchus development is about achieving greater social and economic equality. A. R. Thompson, discussing the same theme in *Education and Development in Africa*, leaves the question open, discussing rather:

... the wish to direct and control the processes of change to create the kind of society we wish to see. In a word we are concerned with development.

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education, the "vast majority" of respondents can, with a little help, understand the notion of a procedural approach to moral reasoning and would welcome courses and teaching materials to put this into practice. The solution of educational problems in a rapidly changing social situation is a complex task made more difficult by our propensity to fall or seem to fall into simple solutions. It is a pity to see a writer who has done much to oppose the exaggerated deference paid to the "facts" of empirical research making in his turn inflated claims for the prescriptive implications of conceptual clarity. Rigorous speculative reasoning and painstaking attention to social and psychological facts must proceed together to provide our only approach to the solution of practical problems. While it is true that professional empirical researchers have no monopoly of truth, neither has the conceptually enlightened amateur.

Ruth Jonathan  
Ruth Jonathan is lecturer in the philosophy of education at the University of Edinburgh.

Back to basics?  
Education for Development or Underdevelopment? Guyana's educational system and its implications for the third world by M. K. Bacchus  
Wilfrid Laurier University Press, \$15.00 and \$8.00  
ISBN 0 88920 084 X and 085 8  
Education and Development in Africa by A. R. Thompson  
Macmillan, £14.00 and £4.95  
ISBN 0 333 30018 1 and 30020 3

The importance of Bacchus's book to students of third world educational development is that it is the only comprehensive scholarly account of the Guyanese educational scene in English. Even more important, in the light of recent criticism of "first world" monopolies in writing and publishing on third world matters, its author is an eminent Guyanese academic who has worked in the country's Ministry of Education.

Bacchus describes the evolution and expansion of the Guyanese school system from colonial times to the present day. His analysis documents the massive increases in educational provision in Guyana from primary to university level. However, despite the commitment of policymakers to racial integration and equality of opportunity, the equal system itself has, unsurprisingly, perpetuated social elitism. Bacchus contends that schools and universities in Guyana work in favour of the haves and to the disadvantage of the have-nots. The examination system is biased towards children from educated and wealthier families. Children of the poor rarely reach the higher rungs of the educational ladder. The remedy, Bacchus suggests, lies outside the education system. If the differentials in pay between prestigious white-collar jobs and the manual and agricultural jobs in the traditional economy were reduced, then, passing examinations would be less important and schools could be used for education rather than occupational and social selection.

The final chapters of the book are particularly useful in relating the Guyanese situation to that in many other third world countries where the problems are similar. In this book Bacchus describes the social and economic conditions necessary for schools to become tools of social justice. His next book needs to outline the implications for the curriculum, school structure and the training of teachers.

For Kazim Bacchus development is about achieving greater social and economic equality. A. R. Thompson, discussing the same theme in *Education and Development in Africa*, leaves the question open, discussing rather:

... the wish to direct and control the processes of change to create the kind of society we wish to see. In a word we are concerned with development.

# BOOKS

## EDUCATION

### Put to the test

Discipline and Moral Education: a survey of public opinion and understanding by John Wilson  
NFER-Nelson, £10.95  
ISBN 0 85633 233 X

It would be hard to say whether John Wilson is best known for his extensive writings on moral education or for his trenchant criticisms of educational research. *Discipline and Moral Education* brings together both of these concerns. In reporting a survey of public attitudes to those topics which arguably generate most heat in discussions about the current state of schooling, Wilson intends to demonstrate how research into educational issues ought, at least initially, to be conducted. If this book bears little resemblance to what we have come to expect from publications of educational research, its author would no doubt cry, "So much the better".

The inquiry reported in *Discipline and Moral Education* was carried out part-time over a period of eight years by an eclectic group of teachers and students united by their "serious concern" for those topics, and by their commitment to conceptual rigour. This group was members of public funding, its members remain anonymous and all primary data were destroyed before publication of their findings.

Since the purpose of the research was to find out whether subjects had "a clear understanding" of discipline and moral education and to discover why these were not "properly understood and practised", a conceptual inquiry by the research group was seen as an integral part of the research. The results of this inquiry form an important part of the book and restate the case, argued more fully elsewhere by Wilson, for a conceptual connexion between human institutions and legitimate authority, and for a set of cognitive prerequisites for good reasoning in questions of morality whose acquisition and exercise should constitute moral education. Though many people would endorse the view that much research (and practice) in education is vitiated by insufficient attention to conceptual questions, far fewer would share the belief that conceptual clarity of itself contains the solution to educational problems.

It is this belief, together with Wilson's conviction that poor reasoning is caused less by ignorance or by defects of intelligence than by psychological aberration, which dominates both the book and the "survey of public opinion and understanding" it reports. Twelve hundred interested parties - parents, teachers, pupils, academics and administrators - were interviewed informally to ascertain the adequacy of their grasp of the key concepts, the causes of their misunderstanding and consequent bad practice, and the means by which these might be remedied. The respondents were classified by four factors guessed to be causally associated with their level of understanding, namely exposure to educational theory, experience of leadership, intellectual mindedness, and "intellectual autism" or unwillingness to tackle the problem appropriately, as well as by age, sex, type of school and social grouping.

Findings of the discipline survey include the suggestion that "indiscipline" arises from teachers' emotional reluctance to act authoritatively and impose the sterner sanctions which parents and pupils would welcome. The breakdown of discipline should be tackled by educating people - and particularly teachers - to understand the rational basis of authority, and by giving to state schools the sort of autonomy enjoyed by independent schools. Findings of the survey on moral education suggest that though there is systematic confusion about the aims and procedures of moral

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A classroom scene in Somalia.

useful ammunition for those who have always maintained that governments, for all their platitudes, wish to maintain the status quo. In an interesting and thought-provoking book, Bullivant confirms the views held by opponents of a multi-cultural curriculum, that despite the rhetoric there is no clear intellectual justification for it; instead there is confusion and muddle and confused thinking relating to multicultural education in general and to the curriculum in particular.

The discussion on Canada brings out the arguments between assimilationists, bilingualists/biculturalists and multiculturalists, and shows why the language issue is as important to ethnic groups as to the French Quebecois. The intensity of the argument is seen from the fact that while the federal government has moved to a multicultural stance there is growing opposition, especially in Western Canada, from those who fear the breakup of the country, or who believe that multiculturalism is a politically motivated confidence trick. Similar opposition to official views is apparent in the USA where there is not only considerable muddled thinking and differing terminology, but where integrationists who favour a multicultural approach are equally balanced by segregationists favouring positive discrimination on behalf of disadvantaged groups. By far the best chapter is that on Australia, where multiculturalism is now official policy but is not clearly formulated, and where the similarities to the British situation in the 1960s and 1970s are very striking.

In bringing together the common strands of all the case studies Bullivant criticizes the intellectual weaknesses of the multicultural concept, emphasizes the ethnocentric views of the political elites, the socioeconomic disadvantage of the majority of ethnic groups and the control of the curriculum by small groups who hide behind the current confusion - but need for a degree of centralized control. Education is a useful yardstick for measuring this dilemma because it is the institutionalized knowledge and the culture of a society. In a plural society it can be used to integrate different groups into the mainstream of society or it can be used to sustain different subcultures. Ultimately, however, education is concerned with power. What knowledge is to be transmitted through the school curriculum requires a degree of selection on the part of "knowledge managers" - administrators, curriculum developers and teachers - and unfortunately "multicultural education", like "community education", is such a vague term that it can mean different things to different people. It can null the suspicions of ethnic minority groups, be embraced by liberal idealists and at the same time provoke anger among conservative ethnocentrics.

For those bewildered by the arguments over integration, cultural pluralism and positive discrimination read the Reports. Brian Bullivant's *The Pluralist Dilemma in Education* should prove refreshing reading, while at the same time it provides

book appears to be a well-researched document it reads in places like a report from *Time* magazine - (Dr X says ... while in the opinion of Professor Y ...). This comment applies to the case studies. Nevertheless Bullivant does bring out the evolution of policy from one of assimilation through integration to cultural pluralism and he highlights the muddle and confused thinking relating to multicultural education in general and to the curriculum in particular.

Keith Watson  
Keith Watson is lecturer in comparative education at the University of Reading.

## Coleridge's unified theory

Poetry Realized in Nature: Samuel Taylor Coleridge and early nineteenth-century science by Trevor H. Levere  
Cambridge University Press, £22.50  
ISBN 0 521 23920 6

Coleridge was not a scientist. Although as a poet and philosopher he was, in comparison with his English contemporaries, uniquely well-read in science, his writings on what nowadays would be called the philosophy of science, unlike those of his German contemporary, Goethe, never contributed anything significant to the development of scientific thought. Why, then, a book about his scientific ideas from a professor of the history of science?

Professor Levere's answer, like so many answers about Coleridge, is neither simple nor straightforward. His stated purpose is the modest one of illuminating one area of Coleridge's thinking, but he ends by illuminating some of the fundamental controversies of nineteenth-century science and their relevance to the

development of later science. Coleridge's own fascination with science stemmed from his vision of the unity of human experience: Plato ... perceived ... that the knowledge of man by himself was not practicable without the knowledge of other things, or rather that man was that being in whom it pleased God that the consciousness of others' existence should abide, and that therefore without natural philosophy and without the sciences which led to the knowledge of objects without us, man himself would not be man.

He set about studying science with the same erratic brilliance with which he took up all other branches of learning. With his omnivorous appetite for reading he acquired a good knowledge of physiology, chemistry and geology, and was able to keep pace with many of their developments during his lifetime. His irremediable ignorance of mathematics virtually excluded him from physics and astronomy much to his regret. Always his concern was to integrate the various fragmentary disciplines into a single coherent whole. To have meaning for him, sciences had not merely to be consistent with each other, but to fit into a moral, metaphysical, religious and philosophical system that embraced the whole of human life. This belief was doomed to failure, but, given the failure of subsequent attempts by entire cultures, it is not his fault, but

the occasional successes that surprise. He was a master of the pertinent and awkward question, startling and often irritating orthodox scientists, and on one occasion even writing to the Prime Minister, the somewhat baffled Lord Liverpool, on the moral dangers of atomistic theory. From our present standpoint he backed many of the wrong horses. His passion for an integrating theory and his hatred of empiricism led him straight into the arms of German *Naturphilosophie*: a theory of science resting on a priori and speculative assumptions more beloved of philosophers than scientists in its own day, and almost entirely discredited since. Yet, argues Levere, what Schelling and his fellows did offer was "a philosophy that, however flawed, put mind and life back into nature, and showed the unity of mind and nature including man with his creative imagination."

Nor was Coleridge entirely wrong. For instance, his belief that Plato and the Pythagoreans, the mathematical "mystics" he believed in, in the reality of ideas, had done more to advance physical science than Aristotlean empiricism has become widely accepted in the twentieth century after the publication of E. A. Burtt's *The Metaphysical Foundations of Modern Science*. Moreover, although Levere does not mention this, Coleridge had early on gleaned from Kant a theory of perception that was not scientifically established until the end of the century.

For Levere the culmination of Coleridge's search for a unified theory embracing the whole of scientific knowledge is his *Theory of Life*, written in support of Hunter's "vitalist" theories against his opponent in the Royal College of Surgeons, Abernethy. Although this was another wrong horse, it gave Coleridge the chance to explain his vision (which went well beyond Hunter) of a divine hierarchy in nature stretching from the simplest chemical elements to man.

Within the terms of his thesis Levere is, of course, correct, and his evidence is always fascinating, and which reveals a much more seminal aspect of Coleridge's scientific thinking: that of the relationship between nature and the human mind, which both imposes its structures, and simultaneously seeks their confirmation in that which is beyond itself. It was this symbolic language of nature that was to be the most distinctive contribution of Coleridge and (in this) his pupil, Wordsworth, to the development of nineteenth-century "science", speculative, fanciful, and often plain wrong-headed - found its true fulfilment.

Stephen Prickett  
Stephen Prickett is reader in English at the University of Sussex.

A third edition of D. R. Brothwell's *Digging up Bones: the excavation, treatment and study of human skeletal remains* has been published by Oxford University Press at £8.95.

S. L. Hurst  
S. L. Hurst is senior lecturer in electrical engineering at the University of Bath.

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BOOKS EDUCATION

Before the Act

English Education, Social Change and War 1911-1920
by Geoffrey Sherington
Manchester University Press, £14.50
ISBN 0 7190 0840 9

Does war accelerate progress, and specifically, does it promote educational change? Professor Peter Gosden studied this question in relation to this country in the Second World War; now Geoffrey Sherington has set out to answer it for the First World War. The course of that war "suddenly revealed" (to the New Statesman in 1916) the "deceitful" state of the nation's educational machinery, and gave an opportunity to effect reforms which had been germinating since 1911. This book gives a good account of the background to, and the significance of, the 1918 Education Act and the failure to implement continuation schools, and it offers a useful corrective to some historical interpretations of specific educational developments. Inevitably, it is mostly concerned with H. A. L. Fisher, of whose achievements as education minister for some six crucial years it provides a valuable assessment. Apart from the denominational conflict, many of the issues confronting educational reformers in that period have a remarkably 1980s ring - the consciousness of foreign competition; backwardness in science and technology; the contest in universities between utilitarian courses and disinterested academic pursuits; "social control" as an ulterior motive for extending the schooling of adolescents; a Labour party combining ignorance and utopianism, passion and compassion, and a profound ambivalence towards the provision of vocational education for the masses. Above all there is the "fatal" schism between culture and crafts" which has hardly been bridged between Dover Wilson's day and Finniston's. What could Fisher do? What did he even want to do? Sherington rightly emphasizes his essentially conservative attitudes, and the extent to which, like so many incoming ministers before and since, he was the prisoner of his civil servants. In this case the bonds were even more powerful, given the intensity of the old school and Oxford links between Fisher and so many of the officials and politicians crucially involved. Yet, as with Edward Boyle, with whom he had much in common (including the explicit aim of fostering "the diffusion of intelligence throughout the population") Fisher found these links positive as well as obstructive. But it would have required a tough-minded radical as well as a more convinced admirer of science to have broken through the powerful networks of vested interest involved. As it was, Fisher himself saw as "lifted the teaching service out of the mire" by his creation, through the Burnham machinery, of scales which were to put teachers among the top 10 per cent of salaried earners in the 1930s. Even here, the failure to build in guarantees of teacher effectiveness meant that, with the fading of the illusion that education would transform society or increase productivity, the burden on taxpayers and ratepayers would, in time, react. And there is a good case for claiming that two defects of the education system - the dominance of classics and of the class system - were if anything stronger during the interwar years than before. A widely bibliographic and indexed, the admirably range of sources used by the author. But in a sense he has strayed too far, for to those sources when he could with profit have turned back and addressed himself to a good question: it is doubtful whether you can measure social change within two, or even ten,

years of an event, which is what this book tries to do. The First World War offered a shock to the social system, and especially to an educational system dominated by notions of "character", of unthinking conformity to an established set of values which may have been appropriate to governing an empire at a relatively docile stage of development, but which had taken a pounding in the trenches and at Jutland. To describe how these notions survived and were reasserted through our political and educational system demands a wider canvas than Mr Sherington has allowed himself.

John Honey

John Honey is professor of education at Leicester Polytechnic.

Freedom or equality?

Is Higher Education Fair? edited by David Warren Piper Society for Research into Higher Education, £9.00 ISBN 0 900868 82 1 Education and the Individual by Brenda Cohen Allen & Unwin, £8.50 and £3.50 ISBN 0 04 370108 6 and 370109 4

Is Higher Education Fair? is a collection of papers which considers whether sections of the community, categorized by their social class, where they live, their age, sex, disability, religion and language, are disadvantaged from the point of view of higher education. The various papers provide evidence to show that the factors considered do affect a person's chances of applying for, gaining admission to and succeeding in higher education. This evidence is of two kinds. First, there is direct evidence about the system itself. For example, John Gay's detailed examination of Oxford University suggests that "in some very real senses it is a Christian university". Secondly, there is indirect evidence about how the system operates in practice. For example, in Great Britain only 13 per cent of all academic staff, 2.3 per cent of professors and 6.4 per cent of readers and senior lecturers are women. Similarly, "black and brown British young people are markedly under-represented in higher education", although detailed statistical information is apparently not available. The intention in Is Higher Education Fair? is not simply to document facts of this sort but also to consider whether they constitute evidence of bias in higher education. But as David Warren Piper says in his introduction, "bias" exists only in relation to some notion of normality, rightness or straightness". For example, only about one sixth of all full-time students in higher education in the United Kingdom are aged twenty-five or over, but it is not obvious that there is anything unfair about this. Similarly, John Gay concludes that there is "a certain structural bias in favour of religion" at Oxford, but goes on to say that "whether this is unfair is a matter for debate". There is, however, very little debate of this kind in the book even though, as Piper goes on to say, "the authors are necessarily taking ethical positions, some very strongly so". Indeed apart from references to fairness, including that in the title, little is said explicitly about which values are meant by "fairness". Since the authors have chosen to investigate educational disadvantage, however, it seems clear that their concern is with the distribution of education, and that the principle on which they are relying is that of equality.

Brenda Cohen's concern in Education and the Individual is with "the essential principles of which educational arrangements should be based". Education and society are however seen as interdependent; "the structure of education has a strong determining influence on society and, conversely, schools are the product of particular forms of society". A contrast is made, therefore, between a liberal and a totalitarian society. Liberalism (associated with

Mill) is committed above all to freedom - the freedom of the individual to pursue his own life in his own way. So far as possible, therefore, decisions, including educational decisions, are left to the individuals who will be affected by them. On the other hand (totalitarian society (associated with Marx) rests on "a conception of personal life subordinate to and dominated by overwhelming political and social controls". It must be added, however, that willingness to accept social controls is presumably also based on principle, although on a principle of equality rather than one of freedom. In effect, therefore, the relevant contrast is between a society based on freedom and one based on equality.

When the matter is put in this way, the suggestion that few would voluntarily opt for totalitarianism rather than liberalism except through motives of personal ambition loses its plausibility. It remains true, however, that those who are strongly committed to liberalism and freedom will have good reason to resist any move towards totalitarianism and increased state control. Moreover, in view of the interdependence of society and education it is argued that a liberal society will become more totalitarian if its educational system is not based on correct liberal principles. "The continued existence of a liberal society" may depend on the ability of its educators "to identify, understand, and then work to preserve" those principles. Brenda Cohen defends independent schools, therefore, on the ground that they create the possibility of educational choice not only for those who exercise it but also for those who do not. The freedom of those in the state system to the extent that they are not in a position to exercise it. Again, it is argued that parents who wish to educate their children personally in their own homes should have the right to do so. Parents' duty to care for and educate their children should only be taken over by the state when parents are unwilling or unable to do so themselves. And religious schools must be permitted, even though it is recognized that "their approach to religious education is bound to be a committed one".

Such a solution, we are told, has been provided by Sir Karl Popper. According to Popper, scientific inquiry begins with a problem; a tentative solution is then criticized in order to eliminate error; and this process begins with problems and ends with problems. Thus scientific knowledge is in principle always falsifiable and therefore always provisional, never certain. Burgess takes this theory of knowledge as a theory of learning also, suggesting that teaching should be replaced by learning. "Learning of any kind, not just discovery at the frontier of knowledge, takes place through the formulation of problems and through trial and error in solving those problems", whether the problems are scientific, formal, philosophical or practical. Once the "logic of education" is understood, a "creative revolution" which takes people and their practical problems as the basis of education will become possible. Students will "take the initiative for planning their own education" instead of having a curriculum based on the problems and purposes of others imposed on them. Higher education will then be open to all rather than exclusive in being confined to those thought capable of benefiting from it. Education will be a service to society and bias will be eliminated when all parts of society are served equally. Moreover, the practical possibility of education along these lines has already been demonstrated by Burgess and his colleagues in the School of Independent Study at North East London Polytechnic.

In my view any education worth the name sets out to change people by among other things, introducing them to problems of which they had no previous conception. It is not how to get what they already want, but is being proposed here, therefore, is the abolition of higher education and its replacement by a social service which accepts unconditionally the limitations imposed by an existing and inevitably parochial outlook. This is a proposal for major change and it is important, therefore, to examine critically the arguments offered in its support. Since the autonomous tradition is defined in terms of its concern for the pursuit and dissemination of

BOOKS EDUCATION

from facing page

claims that bias in higher education is "an inevitable consequence" of the autonomous tradition and can be eliminated only by replacing it by the service tradition.

The claim that bias can be eliminated is inconsistent with recognition of the fact, illustrated by the opposing points of view of these two books, that we live in a pluralist society. But, as David Warren Piper's remark, quoted earlier, points out, bias exists only in relation to a set of accepted values, educational practice being judged to be biased in so far as it fails to conform to them. But it will be judged to be biased only by those who accept those values. Those who give priority to other values (as Brenda Cohen gives to freedom) will make other judgments. And there can be no neutral point of view from which competing values can themselves be judged. Although replacing the autonomous by the service tradition would not eliminate bias it still remains possible to argue that such a change should be made, by considering Burgess's arguments against the autonomous tradition. It is, he says, based on assumptions about knowledge, learning and education "which are accepted without question throughout education and society" but which are "quite simply mistaken". Higher education "rests on an implicit acceptance of induction; in other words on a fallacy". And this leads academics to think of knowledge as "the gradual accumulation of certainties" and of teaching as the introduction of others to those certainties. Given a solution to the problem of induction, however, "we can begin to rebuild higher education".

Such a solution, we are told, has been provided by Sir Karl Popper. According to Popper, scientific inquiry begins with a problem; a tentative solution is then criticized in order to eliminate error; and this process begins with problems and ends with problems. Thus scientific knowledge is in principle always falsifiable and therefore always provisional, never certain. Burgess takes this theory of knowledge as a theory of learning also, suggesting that teaching should be replaced by learning. "Learning of any kind, not just discovery at the frontier of knowledge, takes place through the formulation of problems and through trial and error in solving those problems", whether the problems are scientific, formal, philosophical or practical. Once the "logic of education" is understood, a "creative revolution" which takes people and their practical problems as the basis of education will become possible. Students will "take the initiative for planning their own education" instead of having a curriculum based on the problems and purposes of others imposed on them. Higher education will then be open to all rather than exclusive in being confined to those thought capable of benefiting from it. Education will be a service to society and bias will be eliminated when all parts of society are served equally. Moreover, the practical possibility of education along these lines has already been demonstrated by Burgess and his colleagues in the School of Independent Study at North East London Polytechnic.

In my view any education worth the name sets out to change people by among other things, introducing them to problems of which they had no previous conception. It is not how to get what they already want, but is being proposed here, therefore, is the abolition of higher education and its replacement by a social service which accepts unconditionally the limitations imposed by an existing and inevitably parochial outlook. This is a proposal for major change and it is important, therefore, to examine critically the arguments offered in its support. Since the autonomous tradition is defined in terms of its concern for the pursuit and dissemination of

knowledge for its own sake, it would be surprising if it did not concern itself also with basic assumptions about the nature of knowledge and learning. The claim that higher education is based on assumptions about them which are "accepted without question" is therefore wholly implausible and amounts to no more than a claim to a monopoly of the truth which there is no reason to accept. Indeed, the claim that knowledge must be certain was itself the product of reflection on the possibility of knowledge. Further, these assumptions are not only said to be accepted uncritically but also to fly "in the face of what is almost universally agreed about learning" - agreed, presumably, by those outside the autonomous tradition, although how they come to have a view about the matter at all is not explained. Burgess goes on to refer to Hume and Popper, but that does not help, since both are major figures in the continuing tradition of open, critical inquiry to which the autonomous tradition of higher education also belongs.

Further, the account of Popper's view of the logic of scientific inquiry, on which Burgess places much reliance, is seriously incomplete. The problems with which a scientist is faced are part of a system of problems which is objective in being shared with other scientists. He can know what that system is, therefore, only if he has received the appropriate education - an education based on a syllabus dictated by the relevant branch of science. It follows that students at the North East London Polytechnic, if indeed educated on the lines Burgess suggests, could never become scientists - or, for similar reasons, philosophers, historians or literary critics. Instead, they must remain immersed in the everyday, practical problems which they bring with them. I hope that this is not in fact the case, since if it were those students would clearly be severely disadvantaged. Finally, although the distinction between the autonomous and the service traditions may be useful, it is both wrong and unnecessarily divisive to suggest that we have to choose between them. The universities in this country have and always have had a strong tradition of service to the community which complements as well as competes with their concern for disinterested inquiry. The church, medicine and the law are obvious examples, and there are many more. Just as we have a society based on both freedom and equality, even though the demands which they make sometimes conflict, so also we can have institutions of higher education which are committed to both disinterested inquiry and service to the community.

Glenn Langford
Dr Langford is reader in philosophy at the University of Exeter.

Moral principles

Moral Development and Moral Education
by R. S. Peters
Allen & Unwin, £4.50
ISBN 0 04 370107 8

This book is essentially a paperback reprint of Professor Peters's Psychology and Ethics: Development, which was first published in 1974. Chapters one to seven of Moral Development and Moral Education first appeared in that previous volume and only one further chapter has been added. Given the importance of Professor Peters's views in the philosophy of education, one should not doubt the value of publishing these papers in a form which is not beyond the pocket of most students. However, the book does read as a piecemeal text-book rather than a planned text-book and this may be the cause of some unnecessary repetition. Here, as in all of his work, the clarity of Professor Peters's exposition serves as a model for those wishing to bring into closer relationship the concerns of philosophy and psychology.

Neil Bolton
Neil Bolton is professor of education at the University of Sheffield.

practice. His sympathies lie most closely with the cognitive-developmental viewpoint of Piaget and Kohlberg, for these views are most in accord with his belief that the summit of moral development is the ability to reflect upon the principles which guide our actions. At the same time, he is anxious not to minimize the contributions made by psychoanalysis and the learning theorists and the emphasis they place upon identification and modelling. The contrast between these different psychological perspectives is paralleled within the sphere of moral education by the contrast between those who emphasize the importance of learning the right habits and those who insist upon the understanding of moral principles. Professor Peters aims to bring these two schools of thought together by arguing that as young children cannot, on the whole, be persuaded to do right by appeal to the nature of principles, then habit and training must form the necessary foundation for the later development of moral thought. He suggests that an insistence on the formation of appropriate moral habits through adult direction need not be an irrational, authoritarian stance, and the problem for the educator is to prepare the way for a principled morality through the rational use of conventional techniques of training. This is clearly an interesting and challenging thesis and, moreover, it is one which reconciles the major psychological perspectives on moral development. If such a viewpoint is to be questioned, it may be appropriate to begin by considering the one major assumption which is common to the various psychological perspectives and to Peters's position as an attempted philosophical reconciliation of those perspectives. What is common may be described as a belief in the "late onset of rationality". This belief is axiomatic for the Piaget-Kohlberg school as it is for the Freudians: it is only after a long apprenticeship that children acquire the capacity to direct their thinking appropriately to reality. One can suppose that if this belief turns out to be too simple, then Peters's formulation of the contrast between conventional and principled teaching strategies may also appear too extreme.

Now it is a difficult business generalizing from research into Piaget's theory, but the least that can be said is that over the last decade or so the research of a number of developmental psychologists (for example, that of Bryant and Donaldson) has led us to be much more critical of the assumption that young children are necessarily non-rational. On the whole psychologists nowadays would not wish to insist upon clear-cut distinctions between non-rational children and rational adults. There is a greater awareness too of the significance of the development of shared meanings through social cooperation in infancy. Do we not need also a theory of development which does more than pay lip-service to the positive role played by feelings in moral experience? Professor Peters says that he does not wish the reader to assume that feelings play no part in moral judgments, "a belief that may arise from the emphasis upon rationality. But this caution is hardly new one and we still await a theory which does justice to both thought and feeling in moral development. Of course, Peters's views are considerably more subtle than those he has outlined here. He is, for example, sceptical about the logical nature of Kohlberg's stages and more inclined to accept than is Kohlberg himself, he asks, should we accept just those principles which Kohlberg dwells upon, for we can build a rational morality around any number of moral principles, and those who attain stage-six may well disagree as to which of these should have priority. As is the case in all of his work, the clarity of Professor Peters's exposition serves as a model for those wishing to bring into closer relationship the concerns of philosophy and psychology.

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# BOOKS

EDUCATION

## Lessons for students

**Student Politics: perspectives for the eighties**  
edited by Philip G. Altbach  
Scaerocrow Press, \$14.50  
ISBN 0 8108 1430 7  
When Dreams and Heroes Died: a portrait of today's college student by Arthur Levine  
Jossey-Bass, £12.00  
ISBN 0 87589 481 X

For commentators on the universities, the causes of the student revolt of the late sixties and the relative quiet a decade later have been a kind of ink-blot test, in which many different pictures of these events were seen, some visible to many and some to only a few, but all of them owing something to the viewer's individual perception and imagination.

Some of this breadth of interpretation is to be found in the first of these books - reprints of articles that first appeared in two issues of *Higher Education*, about student politics in the USA, Canada, France, Italy, West Germany, Japan, Greece and India, mainly written about three years ago, with additional (and western) chapters on England, Latin America and Zambia.

The reader is bound to be struck by the similarity of the trends in those industrialized countries with forms of parliamentary government, though the different authors, naturally, emphasize different details and advance differing explanations. Broadly, the period of disruption of universities in the late sixties led to student representatives being given places on various university committees, even in some cases those appointing staff. In the seventies, support for the activists, who were never more than small minorities divided, split and other forms of protest, became less frequent and either it became difficult to find students to fill the places on committees or any small well-organized group could easily take them over.

Although many explanations get an airing, including some of the more theoretical sociological ones, there is nowhere in this book any effective pulling together of all the complex and interrelated patterns of causation - in a sense all the pictures in the ink-blot are there together. For example, why is it that it is in the onetime axis powers (Italy, Germany and Japan) that left-wing activists are turned to terrorism?

While analysis of events at other universities generally seems to me cogent, any discussion of those events I witnessed at Essex always seems off the beam. There must be a moral here somewhere. Levine's important and convincing book gives a much more thorough and penetrating analysis of what has happened within the American system of higher education, the system that has most influence on the British one. In tracing trends, he is able to draw on a series of surveys carried out for the Carnegie Council on Policy Studies in Higher Education, of whom his book was written, and on other surveys. His authoritative study is also one of the most readable books on higher education of recent years.

The generation he is describing is, he reminds us, the first that has grown up in front of a television set. It formed its opinions in the shadow of Vietnam and Watergate, and it reflects the child-rearing and educational practices of its period. He emphasizes throughout that there has been a shift of balance rather than a total transformation. For example, a slightly higher percentage of American adults in the seventies (than in the sixties) expressed right-wing points of view. The students' opinions shifted to the right too, by about the same amount, leaving them still about the same distance to the left of their parents as previous generations had been. Also he refreshingly emphasizes the

gap between reality and myth: "If today's college students seem puny in the shadow of the recollected 1960s, so too would the actual students of that decade in comparison to the myths that have grown up about them."

Though there is now less student activity, it is also of a less visible kind. There is, for example, substantial support for offshoots of the consumer movement, and especially public interest research groups. These put to Representatives and Senators well-researched briefs on issues of interest to students, but gain their main strength from the power of the large student vote in marginal congressional districts. There is a lesson for our students here.

Another trend is to support one's own special interest group - gay liberation, or whatever, instead of a national campaign against racial discrimination, there is the local black students' association, from which black women then break away, until themselves wonder, however, if it exaggerates the degree of change from altruism to self-interest here? The opposition to the Vietnam war of students who might be drafted was not wholly altruistic, while some of the recent student actions he mentions, such as suing a New York legislator for illegal patronage payments to himself, seem largely disinterested. In both the sixties and seventies many student actions were centred on local student issues, while others took up broader problems.

Regrettably, neither book tries to sum up the long-term consequences of the form that the student revolt of the sixties and early seventies took. We can now see that, in most countries, the main result was not so much direct change in the institutions of higher education as a substantial reduction in taxpayers' willingness to pay for universities and their students. We have yet to see the full consequences of this, but no one could doubt their seriousness.

**Ernest Rudd**  
*Dr Rudd is reader in sociology at the University of Essex.*

## In-service training

**Staff Development Matters: academic staff training and development in universities of the United Kingdom, a review 1961-1981**  
by Christopher C. Matheson  
Co-ordinating Committee for the Training of University Teachers, £6.00  
ISBN 0 906631 01 7

On January 7, a colleague in chemical engineering rang me with a request for information. His department was considering going over to a modular structure for undergraduate courses, and he wanted to know how to find out what had been published on this topic. Had a copy of Dr Matheson's book been to hand, I should have immediately been able to tell my colleague to ring CON-TACT, a service provided by Exeter University from 1 pm to 4.30 pm every day of the week on 0392 35400. The information officer there would certainly have been able to tell him everything (= a lot) that I didn't know.

Neither is this the only fact in this exceptionally informative if rather imperfectly bound book. For, Dr Matheson not only helps ignorant slobs like myself to answer obvious if sometimes unexpected questions, by telling us that there are currently 45 universities in the British Isles (or 46, if you count Manchester, and UMIST separately, as he does on page 128). He also provides some fascinating tables and appendices. These give details about what provision is made for staff training at each on the CCTUT mailing list (Poland and Afghanistan, as well as Chile and South Africa), and describe detailed arrangements for cooperation with Sweden. At the same time, some of Dr Matheson's other figures also confirm, at least two of my sup-

**Philip Thody**  
*Philip Thody is professor of French literature at the University of Leeds, and chairman of the Teaching Methods Committee.*

# BOOKS

EDUCATION

## Sequential disorder

**Dyslexia Research and its Applications to Education**  
edited by George Th. Pavlidis and T. R. Miles  
Wiley, £12.95  
ISBN 0 471 27841 6

"Dyslexia" is the clinical term used to describe a specific difficulty in acquiring literacy and fluency in alphabetic-phonetic scripts - literally a "difficulty with the lexicon". Implicit in the term's usage is that the origin of the difficulty is most probably primary, constitutional and developmental (it can also in a minority of cases be traumatic). However, educational policy and practice - especially in Britain - have not in the main accepted the validity of the concept. Local authorities see the issue, at best, as a controversial one.

This useful collection of papers presents an integrated and interdisciplinary approach to the subject by internationally acknowledged experts. The task of the 13 contributors is first to present scientific evidence upon which causality can be attributed; and second, based on such research, to consider activities and techniques for alleviating the dyslexic problem in the classroom.

MacDonald Critchley sets the scene with a scholarly paper examining current attitudes to the phenomenon; the features of language which could present such "barriers to learning"; the possible handicaps in the individual child which prevent him surmounting the barriers; and the "five favourable factors which... assure well for the future". He also touches on "differential diagnosis" and its importance for appropriate treatment (an issue generally not well covered in the rest of the book).

Dr Critchley makes what could be a controversial statement for the educationalist or psychologist that "the diagnosis of specific developmental dyslexia is a medical responsibility". He reviews the accepted psychological diagnostic pointers of "reading retardation" and their predictive relevance, as well as the latest research into the role of eye-movements in diagnosis; the continuing plight of the older, adult dyslexic; and the genetic, familial influences on this specific kind of learning difficulty. His paper introduces many of the enduring features associated with dyslexia, which are explored again in subsequent chapters.

Margaret Rawson introduces the work in America of Samuel Orton, a neurologist and paediatrician whose theories, in the 1930s, of central nervous system involvement and especially those of cerebral dominance and differential functioning of the two hemispheres, have inspired so much scientific research. Professor Wastland then clearly and ably describes how our knowledge of the relationship between brain mechanisms and language, is providing new insights into dyslexia; the key role of the left hemisphere in processing serial, sequential and ordered events (such as alphabetic-phonetic scripts), the role of the right hemisphere for pattern recognition, and the implications of these lateralities for such complex activities as reading, spelling and writing are presented. Professor Masland's paper brings sharply into focus the interdisciplinary nature of the problem, and highlights some serious omissions in educational thinking.

Peter Meudell presents a very detailed analysis of the more pathological aspects of alexia and dyslexia: how something of significance about cognitive organization can emerge from studies of brain damage. His highly specialized chapter on the relationship between loss of linguistic function and brain pathology, though of great neurological interest, is perhaps the chapter with least research relevance to education.

**Margaret Newton**  
*Margaret Newton is senior lecturer in applied and developmental psychology and head of the language development research unit at the University of Aston in Birmingham.*

# BOOKS

EDUCATION

## Acquiring a second language

**Psychology in Foreign Language Teaching**  
by Stephen H. McDonough  
Allen & Unwin, £10.00 and £3.95  
ISBN 0 04 418002 0 and 418003 9

According to the author, this book is intended for "teachers, and others interested in and responsible for language teaching (in particular, English language teaching)". However, I would estimate that only a small number of practising teachers or supervisors would have the necessary technical background, interest and stamina to work their way through it.

The introductory chapter on the basic characteristics of experimentally-based language research and the potential relevance of this work to the day-to-day business of classroom instruction is quite straightforward and cogent. But much of the remainder of the text is presented in a form and style presupposing a degree of familiarity with linguistic and psychological terminology that would be more in keeping with the backgrounds of graduate-level students in these areas. Readability is not enhanced by a tendency to very lengthy paragraphs.

For a target audience of graduate students in second language acquisition and related fields, this text would be generally informative. Literature references are extensive and fairly comprehensive for most of the topics covered. However, a more thorough discussion of the research data available on age and second language learning facility (from Penfield through Lonnberg to Krashen) could have been anticipated, as well as a somewhat more comprehensive coverage of a variety of studies dealing with the shaping of accurate pronunciation (for example, the work of Harlan Lane).

Minor quibbles can be had with a few of the author's statements. For example, the assertion (page three) that beyond a certain point a further increase in sample size brings about "no increase in reliability" would be more accurately phrased as "appreciable" increase. In the discussions of behaviour-shaping through

rewards (chapter two), it is occasionally unclear from the text whether "reward" is being used in a general sense or in the technical Skinnerian sense of "reinforcer". The topical index is quite short and spotty, and hides effective information retrieval, as does the absence of author references within the body of the index. By the same token, the summaries provided at the end of some (not all) chapters are in most cases too brief and general to provide a useful overview of chapter content.

One of the most successful chapters is that on "Social and interpersonal factors" in language learning, which covers some of the sociological and affective implications of a variety of classroom management strategies. The whole chapter on "Individual differences" which includes a well-presented discussion of the contributions of general intelligence, cognitive style, language learning aptitude, and other factors governing effective language acquisition, are more within the scope of reference of the classroom teacher, while still being technically sound.

On balance, the book provides the diligent and properly grounded reader with a considerable amount of useful information but the text is sometimes difficult to penetrate. Although it would not be the book of preference to introduce the average foreign language teacher to the field of language learning research, it would be of interest and some value to graduate students and others who already have a reasonable working familiarity with the topics under discussion.

**John L. D. Clark**  
*John L. D. Clark is director of foreign language education at the Center for Applied Linguistics, Washington, DC.*

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## Universities



Applications are invited for the following posts, for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Senior Research Fellow \$A25,822-\$A24,928; Research Fellow \$A20,983-\$A27,339; Lecturer \$A19,983-\$A27,339.

Further details and application procedures may be obtained from The Association of Commonwealth Universities (AUCU), 38 Gordon Square, London WC1H 0PF unless otherwise stated.

The University of Sydney  
**FIXED-TERM LECTURER IN MODERN HEBREW**  
Candidates should be qualified for teaching and research in Modern Hebrew Language and Literature. Applications should be sent to the Registrar, University of Sydney, 100 Macquarie Street, Sydney, N.S.W. 2000, Australia, by 15 March 1982.

La Trobe University  
**LECTURER IN ECONOMICS**  
(1. Suitable position)  
The School of Economics is seeking a Lecturer in the area of Economic Theory. The successful applicant must be prepared to accept responsibility for a number of undergraduate courses. A demonstrated interest in teaching and research in the field of Economics would be an advantage. However, well qualified candidates should not be deterred by the above requirements. The position is available from 29 March 1982.

The University of Adelaide  
**LECTURER IN POLITICAL SCIENCE**  
Applications are invited for the above position. The successful candidate will be required to teach and supervise research in the field of Political Science. The position is available from 29 June 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

Monash University  
**Part-time Lecturer in International History**  
The following position will be available from 1 September 1982 and is to be filled on a part-time basis.  
**LECTURER (ENGLISH CURRICULUM)**  
The School of Education is seeking a Lecturer in the field of English Curriculum. The successful candidate should have a Ph.D. and a demonstrated interest in research in the field of English Curriculum. The position is available from 1 September 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

Additional information about the School of Education and the requirements for this position can be obtained from the Dean, Professor Barry McDougall, in the University Office, 38 Gordon Square, London WC1H 0PF. This is a tenurable appointment and conditions include superannuation, similar to F.S.U. (for service-related) and a study programme, payment of fees to Perth for postgraduate and research students, removal and settling-in allowances and house purchase scheme.

Procedure for applicants: There are two prescribed application forms, but TWO COMPLETE SETS of detailed applications quoting the appropriate reference number, including full personal particulars, details of tertiary qualifications, career history and description of post held, research specialisation and interests, research completed or currently being undertaken, personal views on teaching, membership of professional institutions or societies and positions of responsibility held, copies of relevant material published by the applicant, when available to take up appointment offered, and the names and addresses of three professional referees should be sent to the Personnel Office, University of Sydney, 100 Macquarie Street, Sydney, N.S.W. 2000, Australia, by 15 March 1982. Applicants resident in the United Kingdom should also send a copy to the Association of Commonwealth Universities (AUCU), 38 Gordon Square, London WC1H 0PF.

The Australian National University  
**SIX POSITIONS - DEPARTMENT OF ANTHROPOLOGY**  
The Department of Anthropology, Australian National University, is seeking six research fellows for the School of Pacific Studies. One available (five as Research Fellow, one as Senior Research Fellow) to take up the position in the Pacific Studies group on 1 October 1982. The successful candidate will be required to teach and supervise research in the field of Anthropology. The position is available from 1 October 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

Research Fellow  
**RESEARCH FELLOW IN SOUTH EAST ASIAN HISTORY**  
The Department of Pacific Studies, Australian National University, is seeking a Research Fellow in the field of South East Asian History. The successful candidate will be required to teach and supervise research in the field of South East Asian History. The position is available from 1 October 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

Research Fellow  
**RESEARCH FELLOW IN SOUTH EAST ASIAN HISTORY**  
The Department of Pacific Studies, Australian National University, is seeking a Research Fellow in the field of South East Asian History. The successful candidate will be required to teach and supervise research in the field of South East Asian History. The position is available from 1 October 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

## UNIVERSITY OF THE SOUTH PACIFIC

Applications are invited for the following posts in the INSTITUTE OF EDUCATION:

**1. FELLOW IN EVALUATION**  
(Post 82/13)  
This position requires someone with special responsibility for MEASUREMENT AND EVALUATION. The appointee will be required to co-ordinate the Institute's regional programme in evaluation, to conduct workshops for educators, to develop and validate tests and examinations, and to consult with Ministries of Education on evaluation and selection policies. He/she may, on occasion, be required to teach pre-service courses in evaluation in the School of Education and to assist with its post-graduate programme.

**2. FELLOW IN ADMINISTRATION/TEACHER EDUCATION**  
(Post 82/14)  
This position requires someone with special responsibility in EDUCATIONAL ADMINISTRATION and/or TEACHER EDUCATION. The appointee will be required to co-ordinate the Institute's regional programme in educational administration and/or teacher education, to conduct workshops for teachers and educational officers, to consult with Ministries of Education about their policies, and to conduct research on related problems. He/she may, on occasion, be required to teach pre-service courses within the School of Education and to assist with its various programmes.

Salary scales: Reader F\$17,820-19,144 pa. Senior Lecturer F\$14,317-15,903 pa. (£1 sterling = F\$1.85). The University has a small number of positions within its establishment for which the British Government provides supplementary allowances. The present posts carry NO such benefits and offers on local terms and conditions only. Gratuities, appointment allowance, low-rental part-furnished accommodation, allowance in lieu of superannuation, three-year renewable contract.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent to the Registrar, University of the South Pacific, PO Box 1188, Suva, Fiji, to arrive no later than 28 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

## UNIVERSITY OF PAPUA NEW GUINEA (Port Moresby)

Applications are invited for the post of DIRECTOR OF THE TEACHING METHODS AND MATERIALS CENTRE (TMCC). The TMCC serves the needs of pre-service education undergraduates and diploma students and aims, in future, to provide a service in the use of audio-visual aids and teaching methods in the University as a whole. The appointee will be expected to provide academic and technical leadership for the staff associated with the TMCC; co-ordinate the production of a series of self-instructional packages associated with a variety of teaching aids; promote and co-ordinate the organisation of seminars/workshops on teaching methods at the secondary and tertiary levels for undergraduates, teaching fellows and other university staff; contribute to the teaching of undergraduates within the B.Ed undergraduate programme; and liaise with other technical services departments in the University. Applicants should have postgraduate qualifications (Master's degree minimum) in education or educational technology, experience in the field of educational technology and teaching experience at the secondary and tertiary levels. Experience in a tertiary level learning resources centre and with the use of video equipment would be added advantages.

Salary scales: Senior Lecturer K19,195 pa. Lecturer Grade II K14,845 pa. Lecturer Grade I K11,485 pa. (£1 sterling = K1.28). Three-year contract; gratuity; support for approved research; leave fares after 18 months service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming three referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University Campus, Port Moresby, Papua New Guinea, to arrive no later than 19 March 1982. The successful candidate should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

Applications are invited for the following posts in the Faculty of Engineering, tentative from 1 September 1982:

1. READER IN ELECTRICAL ENGINEERING.  
2. 4 SENIOR LECTURERS/LECTURERS IN CIVIL ENGINEERING.  
3. 4 SENIOR LECTURERS/LECTURERS IN ELECTRICAL ENGINEERING.  
4. 8 SENIOR LECTURERS/LECTURERS IN MECHANICAL ENGINEERING.

These posts relate principally to the teaching at Diploma/Degree level. Applicants must have an Honours degree in the appropriate discipline and a professional qualification and/or a postgraduate qualification plus relevant industrial experience. For the Reader and Senior Lecturer posts, teaching experience at undergraduate level is essential. In addition, the Reader who will be Head of Electrical Engineering, must have a postgraduate qualification and considerable experience in the planning and development of advanced studies in Electrical Engineering.

Salary scales (including expatriate addition): Reader K 7,500-9,300 pa.; Senior Lecturer K 6,500-8,000 pa.; Lecturer K 5,800-6,800 pa. (£1 sterling = K 1.70). Plus EITHER the British Government may provide salary supplementation in range £2,730-3,128 pa (sterling) for married appointees or £4,440-5,730 pa (sterling) for single appointees (reviewed annually - normally tax-free) and associated benefits. Two to four year contract; biennial overseas leave; gratuity; family passages; baggage allowance.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent to the University of Malawi, P.O. Box 31338, Lusaka, Zambia, to arrive no later than 28 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

## UNIVERSITY OF MALAWI The Polytechnic

Applications are invited for the following posts in the DEPARTMENT OF CHEMISTRY, tentative as soon as possible:

1. 2 SENIOR LECTURERS/LECTURERS IN INORGANIC CHEMISTRY  
2. 2 SENIOR LECTURERS/LECTURERS IN ANALYTICAL CHEMISTRY  
3. 2 SENIOR LECTURERS/LECTURERS IN BIOCHEMISTRY

Applicants must have at least a Ph.D. in the relevant branch of Chemistry. Those applying for a Senior Lecturer post must have had teaching and research experience at University level. Salary scales: Senior Lecturer K5,748-9,732 pa. Lecturer K5,805-8,640 pa. (£1 sterling = K1.66). In very exceptional circumstances the British Government may provide salary supplementation in range £2,730-3,128 pa (sterling) for married appointees or £4,440-5,730 pa (sterling) for single appointees (reviewed annually - normally tax-free) and associated benefits. Two to four year contract; biennial overseas leave; gratuity; family passages; baggage allowance.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent to the University of Malawi, P.O. Box 31338, Lusaka, Zambia, to arrive no later than 28 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

Applications are invited for the following posts in the Faculty of Engineering, tentative from 1 September 1982:

1. READER IN ELECTRICAL ENGINEERING.  
2. 4 SENIOR LECTURERS/LECTURERS IN CIVIL ENGINEERING.  
3. 4 SENIOR LECTURERS/LECTURERS IN ELECTRICAL ENGINEERING.  
4. 8 SENIOR LECTURERS/LECTURERS IN MECHANICAL ENGINEERING.

These posts relate principally to the teaching at Diploma/Degree level. Applicants must have an Honours degree in the appropriate discipline and a professional qualification and/or a postgraduate qualification plus relevant industrial experience. For the Reader and Senior Lecturer posts, teaching experience at undergraduate level is essential. In addition, the Reader who will be Head of Electrical Engineering, must have a postgraduate qualification and considerable experience in the planning and development of advanced studies in Electrical Engineering.

Salary scales (including expatriate addition): Reader K 7,500-9,300 pa.; Senior Lecturer K 6,500-8,000 pa.; Lecturer K 5,800-6,800 pa. (£1 sterling = K 1.70). Plus EITHER the British Government may provide salary supplementation in range £2,730-3,128 pa (sterling) for married appointees or £4,440-5,730 pa (sterling) for single appointees (reviewed annually - normally tax-free) and associated benefits. Two to four year contract; biennial overseas leave; gratuity; family passages; baggage allowance.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent to the University of Malawi, P.O. Box 31338, Lusaka, Zambia, to arrive no later than 28 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

## Universities continued

### FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI, IMO STATE, NIGERIA

Applications for academic posts listed below are in specialized areas outlined as follows:

School of Natural and Applied Sciences:  
(1) Biological Sciences-oriented Programme:  
Senior Lecturers, Lecturers I and II in:  
(i) Industrial Microbiology.  
(ii) Environmental Science and Pollution.  
(iii) Biotechnology.  
(2) Physical Science-oriented Programme:  
Senior Lecturers, Lecturers I and II in:  
(i) Computer Science and Technology.  
(ii) Industrial Mathematics.  
(iii) Applied Geology.  
(iv) Hydrology.

Chemical Science-oriented Programme:  
Senior Lecturers, Lecturers I and II in:  
(i) Polymer and Fibre Science.  
(ii) Food Production Technology.  
(iii) Petro-Chem and Technology.  
(iv) Industrial Chemistry.  
(v) Water Resources.

School of Engineering and Engineering Technology:  
Senior Lecturers, Lecturers I and II in:  
(i) Mechanical Engineering.  
(ii) Petroleum Engineering.  
(iii) Electrical/Electronics Engineering.  
(iv) Metallurgical and Materials Engineering.  
(v) Agricultural Engineering.  
(vi) Water Resources.

The School of Engineering and Engineering Technology is expected to take off in the 1982/83 Session and successful applicants would be required among other things to:

(a) Plan, develop and give courses in their relevant areas for the 1982/83 student intake.  
(b) Arrange workshop practice, engineering drawing, etc. where applicable.

Qualification:  
(a) Lecturers II  
A good honours Degree from a recognized University with at least four years post-qualification experience or Ph.D.  
(b) A good honours Degree with at least six years teaching and research experience or preferably a Ph.D. holder with at least three years teaching and research or industrial experience. Possession of scholarly publication would be an advantage.  
(c) Senior Lecturers  
A Ph.D. plus at least five years teaching and research or industrial experience. Candidates should have some scholarly publications.

Method of Application:  
Interested candidates are required to submit four copies of applications giving the following information:  
Full name, post for which application is submitted, date and place of birth; nationality, permanent home address, current home address, marital status, number of children (with ages), educational background, academic and professional qualifications and distinctions with dates. Working experience, present employment, status and salary, publications and research, non-academic interests/extracurricular activities, names and addresses of three referees, one of whom must be Head of Department or employer. Candidates are advised to ask their referees to send references on their directly and under confidential cover to:  
Nigerian Universities Office  
180 Tottenham Court Road, London W1P 9LE  
to whom applications should be sent by 8th March 1982 and from whom further details may be obtained.

### THE NATIONAL EYE CENTRE KADUNA, NIGERIA

Applications are invited from suitably qualified candidates, resident in U.K. or Europe for the post of ACADEMIC AND PLANNING SECRETARY, who will be accountable directly to the Director of the Centre.

Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming three referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University Campus, Port Moresby, Papua New Guinea, to arrive no later than 19 March 1982. The successful candidate should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

### UNIVERSITY OF CALABAR, Calabar, Nigeria

Applications are invited from suitably qualified candidates for the post of Professor and Head of the Department of Geography and Regional Planning in the University of Calabar, Calabar, Nigeria.

Qualifications:  
Candidates should have a Ph.D. degree in Geography or a cognate discipline and should be distinguished scholars with credible record of publications, and an active interest in administration and supervision of students possible in certain disciplines at Senior Lecturer level and above. Part-furnished accommodation at 85% of salary to a maximum of N300 p.a. or rent allowance in lieu. Passages for candidate, wife and up to five children at beginning and end of contract. Car/bike allowance of N540 p.a.

Salary:  
Grade Level US\$ 16 N14,280-15,000 p.a.

Method of Application  
Candidates should forward their applications together with detailed curriculum vitae in six copies each, stating among other things: age, qualifications, experience, marital status, present salary, and names of three referees who should be requested to send their reports under confidential cover to reach:  
The Director  
Nigerian Universities Office  
180 Tottenham Court Road, London W1P 9LE  
to whom applications should be sent by 15th March 1982.

### UNIVERSITY OF PAPUA NEW GUINEA DEPARTMENT OF GEOLOGY

Applications are invited for the following posts in the DEPARTMENT OF GEOLOGY:

**1. PROFESSOR**  
Applicants should possess considerable experience in at least two of the fields of Economic Geology, Geochemistry, Engineering Geology or Igneous Petrology. A higher degree is essential, and practical or academic experience in a developing country would be an advantage. The appointee will be expected to provide academic and research leadership in a five-man department, and would be eligible for election to the Chairmanship (administrative head). A significant contribution will be expected in the area of advanced training of national academics.

**2. SENIOR LECTURER/LECTURER**  
Applicants should possess qualifications and, preferably, experience in at least two of the fields of Economic Geology, Geochemistry, Engineering Geology and Igneous Petrology. A higher degree is essential, and practical or academic experience in a developing country would be an advantage. The appointee will be expected to be responsible for the delivery of courses and to assist in the introductory courses. A contribution will be expected in the area of advanced training of national academics.

The department is involved in teaching broad-based courses to the B.Sc. degree with a Geology major, and also has some commitment to teaching in the University's Preliminary Year (pre-matriculation level). There are ample opportunities for research in the areas of interest and expertise being sought. Further information on the department's programme and research activities can be obtained from the Chairman.

Salary scales: Professor K21,295 pa. Senior Lecturer K18,195 pa. Lecturer II K16,345 pa. Lecturer I K14,485 pa. (£1 sterling = K1.28). Three-year contract; gratuity; support for approved research; rent-free accommodation; family passages; baggage allowance; leave fares after 18 months service; education subsidies; salary continuation scheme to cover extended illness or disability. Applicants who wish to arrange secondment from their home institutions will be welcomed. Detailed applications (2 copies), including a curriculum vitae, a recent small photograph and naming three referees, should be sent to the Assistant Secretary (Staffing), University of Papua New Guinea, Box 4820, University Campus, Port Moresby, Papua New Guinea, to arrive no later than 29 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

### UNIVERSITY COLLEGE OF SWAZILAND

Applications are invited for the post of LECTURER IN MATHEMATICS EDUCATION in the Faculty of Education. Applicants must have at least a Masters degree in Education, plus teaching experience at University or Teacher Training College. Appointee will teach and supervise methods courses in Mathematics to degree and non-degree students, and plan and teach education courses relating to Curriculum Theory and Practice.

Salary scale: E7,200-9,540 pa (£1 sterling = E1.82). It is unlikely that the British Government will provide salary supplementation or education allowances; but ordinary medical scheme; reasonable rental accommodation; family passages; biennial overseas leave.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent by email to the Registrar, University College of Swaziland, Private Bag, Kweleseni, Swaziland, to arrive no later than 28 March 1982. Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

### UNIVERSITY OF ZAMBIA (Ndola Campus)

Applications are invited for the following posts in the School of Architecture and Planning:

**a. SENIOR LECTURER AND 2 LECTURERS IN ARCHITECTURE**  
**b. SENIOR LECTURER/LECTURER (Architect/Planner) IN URBAN AND REGIONAL PLANNING**  
**c. SENIOR LECTURER AND LECTURER IN BUILDING ECONOMICS**  
**d. SENIOR LECTURER IN LAND ECONOMICS**

Applicants should possess a higher degree together with teaching experience; for appointment as Senior Lecturer level, they should also have research and/or practical experience. The appointee will assist the Dean in initiating the respective degree courses and contribute to the teaching programme.

Salary scales: Senior Lecturer K8,784-9,732 pa. Lecturer K5,868-8,640 pa. (£1 sterling = K1.66). The British Government may provide salary supplementation in range £2,730-3,128 pa (sterling) for married appointees or £4,440-5,730 pa (sterling) for single appointees (reviewed annually - normally tax-free) and associated benefits. Two to four year contract; biennial overseas leave; gratuity; family passages; baggage allowance.

Detailed applications (2 copies), including a curriculum vitae and naming three referees, should be sent to the University Secretary, University of Zambia, PO Box 31338, Lusaka, Zambia, to arrive no later than 29 March 1982.

Applicants resident in UK should also send 1 copy to the Committee for International Cooperation in Higher Education, The British Council, Higher Education Division, 10 Spring Gardens, London, SW1A 2BN. Further details are available from either address.

### NIFE National Institute for Higher Education Dublin, Ireland

The School of Physical Sciences provides a major input over a broad spectrum of engineering degree programmes within the Institute. In addition to operating a B.Sc. in Applied Physics with a specialisation in laser optics, fibre optics, and solid state technology, the rapid expansion of the Institute has created a need for more staff who have the opportunity to contribute to the design and innovation of new programmes in teaching and research.

Applications are invited for the following posts in the School of Science and Paramedical Studies:

**LECTURERS IN PHYSICAL SCIENCES**  
Candidates will be expected to be well qualified academically. They should also have significant research or business, academic or research experience. A substantial research or business record in the following areas will be an advantage: (a) Inorganic/analytical; (b) atomic physics; (c) vacuum electronics; (d) theoretical applications in solid state, applied optics, or semiconductor technology.

Salary scales: Senior Lecturer IE £12,798-15,863 pa. Lecturer IE £10,274-12,131 pa. (£1 sterling = IE £1.34). Current as of 30/1/82; subject to increases in line with Agreement on Pay in the Public Service.

Application forms are available from the Personnel Office, National Institute for Higher Education, Glasnevin, Dublin 9, Ireland. Closing date 30 April, 1982.

### LONDON UNIVERSITY OF INTERNATIONAL HISTORY

Applications are invited for the post of Lecturer in International History in the Department of International History, London University. The successful candidate will be expected to teach and supervise research in the field of International History. The position is available from 1 September 1982. Further information about conditions of appointment may be obtained from the Personnel Manager of the University. Applications, in duplicate giving full personal particulars (including curriculum vitae), should be sent to the Personnel Manager of the University, P.O. Box 496, Adelaide, South Australia 5001, Australia, by 15 March 1982.

### ROYAL ACADEMY OF MUSIC

Applications are invited for the post of Part-time LECTURER IN MUSIC TECHNIQUES (Harmony, etc.). The appointment will be from 1st September, 1982 and will be for not less than ten hours contact each week. Salary will be within the range Lecturer II/Senior Lecturer for which the full-time salary currently lies between £5,482-£12,141 per annum plus London Allowance.

Further particulars may be obtained from the Administrator, Royal Academy of Music, Marylebone Road, London NW1 5HT, to whom applications should be sent by 19th March, 1982.











# Don's diary

## Sunday

Decide to keep a Don's Diary, to see what it looks like at 6PM.

## Monday

8.30am. To sent of learning across town, still dubbed Linnin Heights by taxpayers who misuderstand the tumult of more than a decade ago, and have not yet discovered that it is over. Office staff look as if they have been there since crack of dawn. Their bilingual skills are the linchpin in the smooth running of a language department.

Preliminary discussion with a visiting Fulbright professor colleague on questions for undergraduate exam papers. With a semester system, August-December and January-June, this occurs twice a year and occupies virtually two months. Oral exams last for 40 minutes or more per candidate. The same students are not necessarily involved each time, since they present themselves voluntarily for examination in a three-tier system of courses lasting basically one, two or three semesters. Since subjects are read consecutively, students are read consecutively, students often disappear between courses to work to finance their studies and take out government loans.

Committee meeting to allocate a few teaching hours to non-tenured assistants. A tight budget means the chance of a permanent job is slight, and there seems to be no move towards lowering the retirement age from 67 or 70 if you choose to continue. Do the young realize that we feel guilty about being the lucky ones? What good does it do them if they do?

## Tuesday

Committee meeting to equvalate a foreign qualification with the Norwegian degree system. Lacking detailed knowledge of higher education in the rest of the world, this seems to me at best defensive, at worst a chauvinistic exercise. After the coffee break (no lunch hour here) we assemble for a plenary departmental meeting. The frequency and length of these occasions has mercifully declined in recent years, though democratic participation in administrative decision-making still consumes reams of paper and nibbles at time and patience. Student demands have subsided, the present generation ignoring the predecessors after us by their thousands. Towards three o'clock the school day ends and the rush hour begins. We, too, go home, loaded with preparation, jaded, and ravenous for four o'clock dinner.

## Wednesday

Usual early morning scramble for a parking place on university property, price 50p a day, if found. As the area is open to all, a modern version of town/gown rivalry is played out daily. The alternative, if one is lucky, is a parking meter that must be fed every two hours, and abandoned only at the risk of having to return home for the rest of the day. The grounds which used to be done on the way to work now have to wait until the afternoon, or even, since business hours are short, until the next week or month.

Two double periods of first year practical language teaching, four groups in all: translation from Norwegian into English and discussion of aspects of British and American society and institutions as the basis of essay writing. All teaching is in English and new students will undergo such brain-washing. But it pays off: students' command of colloquial language reflects the change in teaching methods in the schools, though this is accompanied by a narrower vocabulary and a reluctance to

read and explore more widely. Less solemnity and a readiness to appreciate feeble witticisms, together with a drop in student numbers to the levels of the early 1960s, do help to reduce the tension and shyness that dog the language learner.

## Thursday

Final seminar for third-semester students on British society since 1945. After general surveys of British and American civilization in the first and second semesters, the topic is chosen for in-depth study. Since the core of all university courses lies in the core of a specific number of printed pages, finding satisfactory, concise literature is a problem in a field so inter-disciplinary, yet methodologically bound by its role as a component of a degree in the humanities.

Meeting to set exam questions. Because of recent changes in textbooks and teaching we have double the normal number of papers to organize: old syllabus, new syllabus, first level, second level, combined first and second levels (a ten-hour marathon instead of six) and so on.

## Friday

Double lecture on British civilization for first-year students. The standard length of the lecture is three-quarters of an hour, starting 15 minutes after the hour. The "academic quarter" is a hallowed educational tradition. Even in primary school there are breaks between each lesson, when the children are driven out on to the playground (or, in the case of some secondary schools, to the street), whatever the weather, five times a day, for air. This is because windows must always be closed when rooms are occupied, for fear of draughts.

This morning I forget that I am wearing new and stronger glasses, so that whereas last week the faces in the back row were a blur, but my notes on the lectern could be taken in at a glance, now the situation is reversed. Bello's chiding ("Remote and ineffectual Don!") takes on new relevance as I sway forwards and backwards, trying to get my cues into focus. Thankful for once that British society in the 1950s and 1960s seems just like yesterday.

With relief to my office, where I can see everything well, almost without glasses. Consultation hour for students: queries about where to get money in order to study in Britain (ask the British Council); last-minute obligatory essays that have to be signed before candidates may sit the examination.

## Saturday

Appointment at hairdresser: a blessed half hour of totally undisturbed concentration, marking translations and essays under the drier. Since garages are the only places of business to stay open after 1pm, take in car to get sussed tyres and a polish to: repair ice and snow. The TV weather map shows that only our first winter postal strip is free of the already dark at 3pm. Soon we shall leave for work and return home in darkness. Transition and parking policies are aimed at discouraging car ownership, but in an area where umbrellas wear out quicker than they arc mislaid, a roof over head and books does not seem an unduly luxurious protection against the elements.

Last post of the week at 12 noon. According to a certain encyclopedia I am an intellectual and am therefore urged to send in my biography at the cost of subscribing to the volume.

## Elizabeth Robbins

The author is lecturer in British and American civilization in the department of English, University of Bergen, Norway.

The current situation in the United States and Great Britain has been described in various ways, all suggesting a form of malaise. Alice Rivlin, the first director of the Congressional Budget Office, said that "as a nation we are luxuriating in a massive national gripe session in which everyone is enjoying telling everyone else that nothing works and that no one is competent, especially those whose misfortune it is to lead the national government."

It has always been so, as anyone of us could prove by quoting from observers as far back as the Old Testament prophets. In fact, the best statement of "the crisis of confidence in education" was written in the Carnegie Commission's final volume in 1973. "The prevalent attitude is more to look back with longing than to look ahead with hope - the golden age of the past is more attractive than any conceivable prospects for the future."

Eight years have not brought change, only an escalation in the factors creating that view: the growth of knowledge; continuation of inflationary increases in costs; a sense of the accelerating velocity of the population decline; and of the reality of cutbacks in federal funding.

Ironically, the size of our problems suggests that this is no time for losing nerve. The larger the problem the more urgent the need for planning for the future rather than simply reacting to it.

The issue is not the prospect of poverty, for indeed, except for the past two decades, higher education has lived on short rations. The issue is the remembrance of affluence and the down-sizing necessary in our retreat from it.

We can no longer reflect the entire universe of knowledge in the curriculum of a single institution. We cannot cover all fields without reducing the adequacy of our coverage in major fields, which would in turn dilute our quality. We must preserve quality with fewer resources.

Therefore, we must learn strategic planning. This involves making sure programmes respond to a college or university's own particular environment, mission, history, circumstances, sources of support, and commitment. It means learning to do

## Planning the future with less



George Rainsford

some things superbly, some things adequately, and others not at all. It means learning to say no, to give up or suspend some subject or fields as knowledge changes, or as they are seen as no longer primary to our mission, or as our abilities and resources constrict. Just as an increase in size does not increase quality, a decrease in size does not decrease quality.

Strategic planning implies retaining the ability to move into carefully chosen new fields or new combinations of fields as new needs or knowledge emerge.

If we know anything about the future, it is that it will be different from both the past and the present. We had better prepare for that or we will surely mortgage the future in an unsuccessful attempt to protect the years ago that within four years we would be living with a four-fold increase in the price of energy, we would have lost what we could not do it. Thus in planning for the future of

education a sense first of proportion of hope is essential. The recognition of certain basic difficulties will be helpful.

There is no assurance that individual departments or institutions will make the hard decisions rather than leaving them to others. Indeed there is no assurance that strategic decisions will make educational provision for the nation. The even enlightened self-interest is the answer to the dilemma. But the cause. There needs to be a structure of autonomy and planning if the future of higher education is to be left to anything other than the market place.

With public disagreement common among experts and people making their expectations dashed and opportunities diminished, there is a tendency to feel that someone is to blame and that others are benefiting from one's own deprivation. When there is a call for sacrifice, it is important that sacrifice be seen as both necessary and equitable.

All major social concerns involve multiple values, beliefs, and interests, many of which are incompatible. Since all values cannot be maximized at once, attempted solutions will always involve trade-offs. Moreover, many of the areas which we must respond cannot be fully anticipated so that decision making will be continuous and incremental. There will always be mistakes and some conflicts which cannot be resolved. In this context, it is important to understand that there are no panaceas.

If the above can be taken as a representative sample of anyone's litany of thoughtful concerns, then several implications follow for educational planners. First, planning a subject must be strategic. In personnel it must provide structures and procedures that encourage wide participation of those who will be affected by decisions. Secondly, it must be capable of dealing with the larger network of concerns that unite the needs and aspirations of a single department to those of institutions as a whole and by extension, those of higher education and the needs of the nation.

But it would be quite unreasonable for Professor Smith to say this sort of thing to Professor Jones in public, because it would hurt both their feelings too much and they'd never feel easy taking sherry together again. I have increasing doubts about the efficacy of this system. Poor old Professor Jones, who is now being forced to take early retirement, has a right, I believe, to know why. It might just be that he's quite a good geographer, and Professor Smith wants the money for his new laboratory at Bluetown. But the traditions of peer-review confidentiality for dons and an official secrets-act-signature for the civil servants who supervise them in the UGC, combine to ensure that, like Professor Jones, we shall never know the reason why.

By all accounts, it will not be thus in the public sector. Mr Christopher Ball, Dr Parkes's opposite number and chair of CLAEH has declared that his New Body will be comparatively open and open. This, I suspect, is partly because he has decided in discretion is the better part of valour, and this is equally true of design education. These distinctions made in my book (things, places, messages) were those of convenience to aid the discussion of design practice. I hope they all draw a big breath and do so over in veiled language at first. Since they are going to be nestling next to the UGC in Park Crescent, the attack of Scarnianite openness might just, with a bit of luck, prove contagious.

In all our institutions - business, politics, academia, industry - this sense of openness will not go away. Most assuredly Ms Harman will go to the European Court in Strasbourg and win, and Lord Diplock will have to man another set of barricades a little further back.

An increasing flow of directives from Brussels will even compel our businessmen to reveal to their trade unions what they would rather keep quiet about. Clive Jenkins has already cottoned on to this as his somewhat slower colleagues in the UGC will in due course. I hope the universities are not too far behind.

Mr David Page is refreshingly plain-spoken about postgraduate design education (THES, December 4) but again I rather doubt whether the situation at the Royal College of Art (in confidentiality) is readily amenable

## LETTERS TO THE EDITOR

### Provision of pharmaceutical education

I refer to the article by John O'Leary (THES, February 5) which outlined the initial activities of the new National Advisory Board. Lest conjecture becomes folklore, I would like to correct the impression given in that article that the recent UGC cuts in pharmaceutical education were made on the grounds that extra provision was available in the public sector. Whilst I do not know what was discussed behind closed doors, the UGC in answer to strong criticisms of these proposals, has said that it took information from a number of sources and was particularly mindful of a recent manpower survey published by the Pharmaceutical Society of Great Britain, which suggested that an over-production in pharmacy

graduates was possible. Many academics in the university schools of pharmacy and the PSGB have jointly taken issue with the UGC, both upon their interpretation of the data available to them in the manpower survey and also their lack of discussion with the parent professional body. Whatever the rights and wrongs of the UGC advice to reduce cuts by 20-25 per cent in pharmacy by (the UGC) DHSS. Government. PSGB nor individual schools of pharmacy) has anywhere suggested that a shortfall in university numbers can be made good by an increase in those graduating from the polytechnic schools of pharmacy. In the light of what has happened

to the university schools of pharmacy, there is certainly a very strong case for maintaining the numbers of pharmacy undergraduates in the public sector - one hopes that someone will give this advice to the NAB! The profession however is anxious to maintain the existing balance of graduates between university and the public sector, and the article is inaccurate in suggesting, explicitly or implicitly, that it would be acceptable to shift the balance of education for a major health profession from the university to the public sector. Yours faithfully, PROFESSOR P. S. J. SPENCER, The Welsh School of Pharmacy, University of Wales Institute of Science and Technology.

### CNAA validation

Many, like myself, will no doubt be struck by the arrogance of the response of the CNAA's engineering board to Oxford Polytechnic's proposals (THES, February 5), of course the submission was properly validated both inside the institution and through consultation with eminent engineers from outside it. We surely have enough experience to be trusted to do that.

It is about time that some at least of the CNAA board members came to understand the nature of partnership in validation. Insolent comments are not appropriate in this situation. Perhaps Dr Kerr might organize classes in "interpersonal relations in a partnership situation" for some of his committees?

John Pratt's letter on public sector funding has perhaps some tenuous links with this matter, seeking to establish controls on other than

financial criteria. Personally I prefer the monetary ones, which leave the academics free to make the educational decisions, and work them out within the finances allocated. It is possible for the layman, the academic and the politician to comprehend financial limits and the problems of working within them. Other controls, whether academic or political, are likely to be polemical and, ultimately, inconclusive. No doubt it can be argued that this is the natural response from a low cost institution to ideas from a high cost one. The alternatives, I believe, lead much more easily to controlling bodies who deserve the type of response set out at the head of this letter.

Yours faithfully, C. A. HORN, Faculty of Modern Studies, Oxford Polytechnic.

### Virginia Woolf

Valerie Shaw's discussion of my book on Virginia Woolf and her doctors (THES, February 5) shows how curiously sensitive supposedly critical people can be when their great myths are questioned - surprisingly, it turns out that a romantic view of "madness" seems to be one that survives in our society. Miss Shaw exclaims "aha" when she learns that I did not quote one of Virginia Woolf's references to "madness" in a letter. Not having been in a university English department for some years, one is genuinely surprised to learn that irony can no longer be recognized. Miss Shaw can't have it both ways. Leonard Woolf maintained that one of the symptoms of Virginia Woolf's madness was that

she would not admit that she was ill. Selective use of evidence in an oeuvre so vast as Virginia Woolf's can lead to the pasting together of almost any case.

As for Miss Shaw's assertion that I have ignored Virginia Woolf's novels - one has only casually to peruse my book to see that the first three chapters contain extensive analyses of specific passages from the major novels, and my final chapter includes a round discussion of the almost wholly neglected *Flush*. One can only hope that readers will look at the text and make up their own minds. DR STEPHEN TROMBLEY, 40 Midway Grove, London, N1

### Design skills

I have seen a number of references to my book *What is a designer?* in your recent correspondence, so now the dust has cleared a little, perhaps you will permit a personal comment.

On a point of prior definition, I agree that words like "art" and "design" are at once too vacuous and all-embracing to serve any useful purpose unless concrete instances are held firmly in view. The design spectrum is extremely wide with quite different problems at its extremities, and this is equally true of design education. These distinctions made in my book (things, places, messages) were those of convenience to aid the discussion of design practice. I hope they all draw a big breath and do so over in veiled language at first. Since they are going to be nestling next to the UGC in Park Crescent, the attack of Scarnianite openness might just, with a bit of luck, prove contagious.

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to shorthand analysis. There is surely no basis whatever for a comparison with the Bauhaus or the Hochschule fur Gestaltung at Ulm. Pacing the austere corridors of Max Bill's building I recall that the RCA seemed inconceivably distant, and not unlike a cultural front for *Playboy* magazine. For his part, Sir Robin Darwin told me (in 1961) that "this small German school" was quite unworthy of serious attention. I mean no disrespect to Sir Robin's memory by this recollection; as might now be said, he was into a very different ball-game - and playing to win, which he did, with distinction.

However, as the historian F. A. Ridley found occasion to remark, a public institution must be understood less in terms of its "truth claim" than as a complex life-support system for all concerned, with survival as its first responsibility. The major English institutions (he added) have long since learned their survival strategies from the signal success of the English ruling class in such matters. The RCA is no exception.

Craft fixations are a much lesser concern. Yet if the RCA has always been somewhat handicapped by an obsession with its own standing, it has many strengths, including a healthy scepticism about the value of intellectual fustian as a substitute for design products. In a negative way this is a strong asset. I speak as a flannel-fancier of repute; but also as a designer. Yours faithfully, NORMAN POTTER, 40 Hyphen Press, Blenheim Gardens, Reading.

### Smoking monkey

You may not know the origin of the smoking monkey picture you chose to place next to my own unphotogenic face in the issue of February 5. It appeared in *The Times* of May 8, 1975, embedded in an article by Dr Robert Jones. Neither Dr Jones then, nor I at the British Association meeting, referred to it in any way. At that time Lord Brock took the trouble to discover its origin, and in a Lords debate (Hansard May 14 1975 cols 758-9) reported that it was a Russian picture distributed by the Tass News Agency. I will not add his further cautious comments, because the text of the present article seemed to me very fair, and indeed for the first time sets out in the public press the salient points in a difficult moral field. The monkey reappeared in Bernard Dixon's *Times* article of October 23 1981 *The Times* new "logs"?

Your readers may be interested that soon after the resulting Radio 4 programme some days after the meeting, an unknown caller rang my wife to say that "her (adjectival) husband would get a knife in his back one of these dark days". Yours faithfully, RICHARD N. TUCKER, Senior Assistant Director, The Scottish Council for Educational Technology.

Yours faithfully, PROFESSOR SIR WILLIAM PATON, Department of Pharmacology, Oxford.

Sir, Your item on the uses and abuses of animals in laboratories (THES, February 5) was accompanied by photographs of Sir William Paton and a monkey smoking a cigarette. What image do you have of your readership that you considered it necessary to indicate in the caption that Sir William was the one on the left?

Yours faithfully, PETER BARNES, Faculty of Educational Studies, The Open University.

Sir, - I have seen a number of references to my book *What is a designer?* in your recent correspondence, so now the dust has cleared a little, perhaps you will permit a personal comment.

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### Problems of copyright

The article on copyright by Paul Flather (THES, February 5) highlights a problem which is going to have an increasingly restrictive effect on education unless the current legislation can be radically altered.

Having chaired more than two years of negotiations between the Wolfenden committee and Scottish education (COSLA, the Central Institutions and the Colleges of Education) we are SCET can understand the need for authors to receive royalties for their work. At the same time copying technology of all types has far outstripped the provisions of the Copyright Act and educational practice relies heavily on the ability to copy both print and non-print learning resources.

Much hope has been placed on the Green Paper but unfortunately its proposals virtually ignored the question on institutional copying of materials for the purposes of education.

One of the reasons for the eventual failure of the Scottish negotiations on blanket licenses for schools and colleges was the level at which the rights owners wished to pitch their costs. We were talking about 1p or 2p for schools and the possibility of 4p per page for journals. These calculations were based on surveys of actual use. It would be interesting to know whether similar surveys were done to determine the average number of pages copied for students' use in universities. Whilst we believe that licensing, unpalatable as it may be, is the best long-term solution to the question of copyright and royalties the imposition of fees as high as 10p a side will only result in the closure of courses and even less use of materials. Rather than killing the goose which may lay a sustaining if not golden egg, is it not time that the rights owners and potential licensees join forces to persuade the Government to change the legislation sensibly rather than by being at odds with one another?

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### Union view

## Robbins principle reversed

It seems almost a perversion that the Government, through the University Grants Committee, is forcing universities to cut back on student numbers at a time when the numbers of people seeking a university place are rising rapidly.

For the first time the Robbins principle, which states that all people who are qualified for higher education and want it should have the opportunity, is being savagely attacked. It is significant that when Sir Keith Joseph and his officials were asked by a Select Committee recently to state the Robbins principle, they were unable to do so and it was left to the chairman of the Select Committee to read it out. It is being hinted that we are turning out too many graduates and yet at the same time the proportion of younger people going into a higher education is less than in France, Germany and the United States.

All of us in higher education over the past few years in particular, have watched the number of women applicants for university places pushing forward far more rapidly than the number of men.

We could foresee equality of opportunity for women in higher education being achieved in a very few years. This was turning out to be the one clear example where the legislative framework relating to equal opportunities was being respected in society. The number of mature students was also increasing and it seemed that the United Kingdom was set to catch up with its counterparts.

## AUT

All this has now been knocked on the head. Not only have the savage financial cuts forced universities to cut back but at the same time the screws have really been put on. Some universities, in the light of the application explosion, were willing to make arrangements within their existing resources to take in more students but two things have happened. First of all, the University Grants Committee laid down strict student number targets with the implied threat that universities might suffer if they exceeded those targets and second, in order to enforce this, the Department of Education and Science reduced the home student fees that local authorities have paid to universities so that the would be no incentive for universities to draw any more income by taking in more students.

The Government keeps saying that the number of applicants will fall over the next few years. In vain does one point out to the Government that its forecasts are based on the assumption that the number of applicants is directly related to the number of 18-year-olds?

The latest UCCA figures show that applications for 1982 are up by 6 per cent, whereas the 18-year-old population has only increased by 1/2 per cent. As I write the Government has announced that unemployed youngsters who decide to improve their education by part-time study, rather than spend their time on the dole, will now not receive social security benefit if their study period exceeds 21 hours per week - and lunch breaks and private study periods will be included in this. In addition the Government's youth training programme to commence shortly seems nothing more or less than the provision of a pool of cheap labour for industry and commerce. The mark of any civilized society can be summed up in the phrase "only the best is good enough for our young people". With what the Government is doing we seem to be moving in the reverse direction.

Yours faithfully, IVOR CREWE, SSRIC Data Archive, University of Essex.

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Laurie Sapper  
The author is general secretary of the Association of University Teachers